National Energy Board | Office national de l'énergie

Reasons for Decision

NOVA Gas Transmission Ltd.

GH-004-2011

July 2012

Facilities

Canada

National Energy Board

Reasons for Decision

In the Matter of

NOVA Gas Transmission Ltd.

Section 52 Application dated 15 July 2011 for the Lesimer to Kettle River Crossover Application

GH-004-2011

July 2012

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Abbreviations

Aboriginal Communities	First Nation and Métis Communities
ACFN	Athabasca Chipewyan First Nation
Applicant or the Company	NOVA Gas Transmission Ltd.
Application	Application to the Board, pursuant to section 52 of the *National Energy Board Act* for a Certificate of Public Convenience and Necessity for the Leismer to Kettle River Crossover Project
ASRD	Alberta Sustainable Resource Development
Bcf/d	billion cubic feet per day
BLCN	Beaver Lake Cree Nation
Board or NEB	National Energy Board
CEA Act	*Canadian Environmental Assessment Act*
Certificate or CPCN	Certificate of Public Convenience and Necessity issued under section 52 of the *National Energy Board Act* authorizing the construction and operation of a facility
CHRP	Caribou Habitat Restoration Program
CML 193	Conklin Métis Local No. 193
CML 214	Chard Métis Local No. 214
CNR	Canadian National Railway
COS	cost of service
CP	cathodic protection
CPDFN	Chipewyan Prairie Dene First Nation
CPP	Caribou Protection Plan
CRDAC	Conklin Resource Development Advisory Committee
CRDNC	Christina River Dene Nation Council
CSA	Canadian Standards Association
CSA Z662	Canadian Standards Association Z662, Oil and Gas Pipeline Systems

DFO	Fisheries and Oceans Canada
Draft ESR	Draft Environmental Screening Report
EA	environmental assessment
EAE	Enhanced Aboriginal Engagement
EC	Environment Canada
EPP	Environmental Protection Plan
EPR	Emergency Preparedness and Response
ERP	Emergency Response Plan, also referred to as Emergency Procedures Manual
ESR	Environmental Screening Report pursuant to the CEA Act
FA	Federal Authority
Federal Coordination Regulations	CEA Act Regulations Respecting the Coordination by Federal Authorities of Environmental Assessment Procedures and Requirements
Filing Manual	National Energy Board Filing Manual, as revised from time-to-time
FMFN 467	Fort McKay First Nation No. 467
FMFN 468	Fort McMurray First Nation No. 468
FMML 63	Fort McKay Métis Local No. 63
FMML 1935	Fort McMurray Métis Local No. 1935
FMML 2020	Fort McMurray Métis Local No. 2020
FT-D2	NGTL firm transportation - delivery (Group 2)
GJ/d	Giga Joule per day
ha	hectares
HLFN	Heart Lake First Nation
IMP	Integrity Management Program
IPA	TransCanada's Integrated Public Awareness program
km	kilometre

kPa	kilopascals
m	metre
mm	millimetre
m^3/d	cubic metres per day
$10^6m^3/d$	million cubic metres per day
Mcf	thousand cubic feet
MCFN	Mikisew Cree First Nation
MMcf/d	million cubic feet per day
MNA Region 1	Métis Nation of Alberta Region 1
MOP	maximum operating pressure
MPMO	Major Projects Management Office
MUA	Master Utility Agreement
NEB or Board	National Energy Board
NEB Act or the Act	*National Energy Board Act*
NGTL	NOVA Gas Transmission Ltd.
NPS	nominal pipe size (in inches)
OCC	TransCanada Operations Control Centre
OD	outside diameter
O&M	Operations and Maintenance
OPR-99	*Onshore Pipeline Regulations, 1999*
PFP	Participant Funding Program
the Project	Leismer to Kettle River Crossover Project
PPBOR	Plan, Profile and Book of Reference
QMS	Quality Management System
RA	Responsible Authority
Reasons	Reasons for Decision
RFMA	Registered Fur Management Area

RMWB	Regional Municipality of Wood Buffalo
RoW	right-of-way
RSA	Regional Study Area
SAGD	steam assisted gravity drainage
TC	Transport Canada
Tcf	trillion cubic feet
TEK	traditional ecological knowledge
TLU	traditional land use
TTFP	NGTL Tolls, Tariff, Facilities and Procedures Committee
TWS	temporary workspace
WBMC	Wood Buffalo Métis Corporation
WLML	Willow Lake Métis Local No. 780
WCSB	Western Canada Sedimentary Basin

Recital and Appearances

IN THE MATTER OF the *National Energy Board Act* and the Regulations made thereunder;

IN THE MATTER OF an application dated 15 July 2011 by NOVA Gas Transmission Ltd. under File No.OF-Fac-Gas-N081-2010-15-02 for a Certificate of Public Convenience and Necessity under section 52, Part III of the *National Energy Board Act*, to construct and operate the Leismer to Kettle River Crossover consisting of 77 kilometres of 762 mm pipe and related facilities from a tie-in at the existing Leismer compressor station to provide additional capacity to transport sweet natural gas on the Alberta System, and;

IN THE MATTER OF National Energy Board Hearing Order GH-004-2011 dated 1 November 2011;

HEARD in Fort McMurray, Alberta on 8 May 2012;

BEFORE:

L. Mercer	Presiding Member
R.R. George	Member
G.A. Habib	Member

Appearances	**Participants**	**Witnesses**
S. H. T. Denstedt Q.C. J. Forrest S. Duncanson	NOVA Gas Transmission Ltd.	P. Bentham C. Campbell J. Daniels N. Jalotjot C. Schell D. Schultz M. Hansen
L. Douglas Rae	Chard Métis Local No. 214	R. Montgrand
A. Herman	Christina River Dene Nation Council	A. Herman
K. Hobbs	Conklin Métis Local No. 193	K. Hobbs
P. Johnston J. Nicholson	National Energy Board	

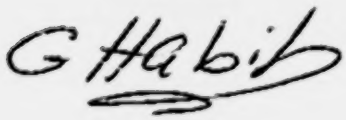
Chapter 1

Disposition

The National Energy Board (NEB or Board) has considered the evidence and submissions made by all participants in the GH-004-2011 proceeding. The Board's views and conclusions on individual matters which fall within the scope of section 52 are contained in the following chapters, and constitute our Reasons for Decision (Reasons) in respect of this matter. By letter dated 21 June 2012, the Board rendered its decision with reasons to follow. The decision has been reproduced in Appendix II.

L. Mercier
Presiding Member

R.R. George
Member



G.A. Habib
Member

Calgary, Alberta
June 2012

Chapter 2

Introduction

2.1 The Application

On 15 July 2011, NOVA Gas Transmission Ltd. (NGTL or Applicant or Company), applied to the National Energy Board (NEB or Board), pursuant to the *National Energy Board Act* (NEB Act or Act) for a Certificate of Public Convenience and Necessity (Certificate or CPCN) to construct and operate the Leismer to Kettle River Crossover Project (the Project).

The Project would involve the construction of approximately 77 km of new 762 mm outside diameter (nominal pipe size (NPS) 30) pipeline and related facilities from a tie-in at the existing Leismer Compressor Station located at LSD 3-4-81-13 W4M then easterly to a tie-in point at the existing Meadow Creek Lateral. The pipeline will continue easterly to tie into the existing 273.1 mm (NPS10) OD Kettle River Lateral and existing 406.4 mm (NPS16) OD Kettle River Lateral Loop at LSD 14-26-80-6 W4M, located approximately 90 km south of Fort McMurray, Alberta.

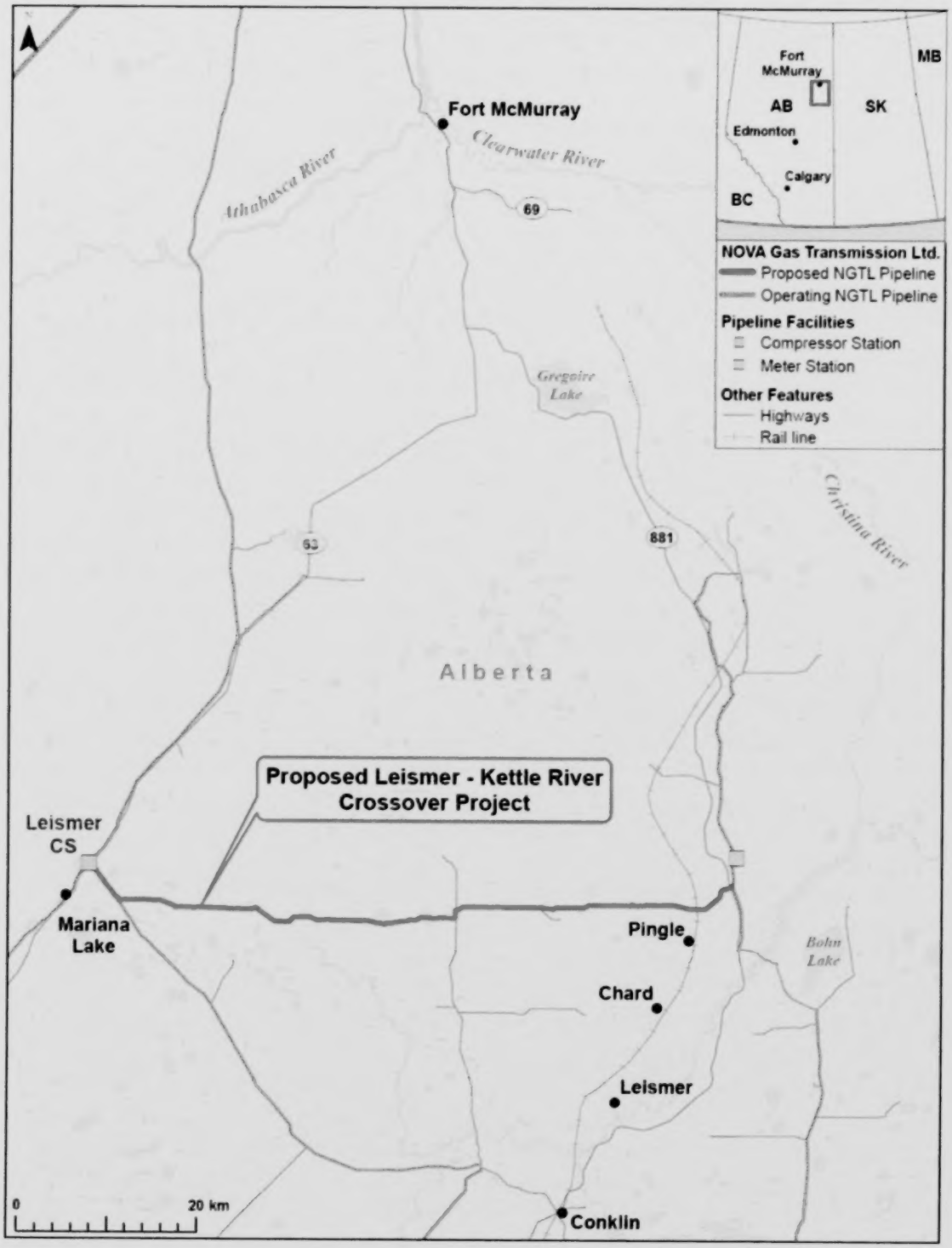
The Pipeline right-of-way (RoW) would parallel existing linear disturbances for approximately 55 km, of which, approximately 29 km is considered contiguous and approximately 26 km is considered non-contiguous. The remaining 22 km of RoW for the Project does not parallel existing linear disturbances. Additional facilities would include pipeline valves, cathodic protection systems and communications and controls equipment. NGTL is proposing to begin construction in November of 2012. In order to meet service requests, the Project is required to be in service 1 April 2013. The Project has been designed for an initial capacity of approximately 27.5 $10^6 m^3/d$ (972 MMcf/d) of sweet gas. The estimated cost of the Project is $157 million.

The Project would transport sweet natural gas from other parts of the Alberta System to supplement declining local supply and meet the increasing market demand in the Kirby area.

The Project is required to serve growing industrial demand in the Kirby area, primarily consisting of gas to serve existing and future oil sands projects in northeast Alberta. The forecast includes gas deliveries for existing projects, expansions, and new projects in the area.

The map in Figure 1-1 provides an overview of the proposed Project facilities and pipeline routing.

Figure 1-1
Leismer Kettle River Crossover Project



NGTL has applied to the Board for:

- a Certificate of Public Convenience and Necessity, pursuant to section 52 of the NEB Act for the construction and operation of the Leismer Kettle River Crossover Project;
- any other relief as NGTL may request or the Board may consider appropriate.

2.2 GH-004-2011 Hearing Process

2.2.1 Participant Funding Program

The NEB Participant Funding Program (PFP) supports public participation in oral facility hearings that are held under the NEB Act. The PFP applies to the NEB's regulatory process for oral facility hearings, including hearings considering applications for pipelines or power lines, and abandonment of pipelines or power lines.

On 14 January 2011, the National Energy Board made available funding under its Participant Funding Program to assist landowners, Aboriginal groups, incorporated non-industry not-for profit organizations, and other interested parties to participate in the regulatory review process for the Project.

The Funding Review Committee received a funding application from Chard Métis Local #214 (CML 214) indicating that it had traditional territory in the vicinity of the Project. The Committee concluded that the application received would contribute usefully to the hearing process. Full funding to the level requested by the applicant was recommended.

2.2.2 NEB Hearing Order and Hearing Process

On 1 November 2011, the Board issued the GH-004-2011 Hearing Order, which established the process for the Board's consideration of the Application.

The Hearing Order included the List of Issues which the Board proposed for consideration during its assessment of the Application. The List of Issues is included in Appendix I of these Reasons for Decision.

The oral public hearing for the Project, pursuant to Hearing Order GH-004-2011, was held in Fort McMurray, Alberta on 8 May 2012. All parties agreed to submit written final argument by 10 May 2012.

2.2.3 Environmental Assessment Process

An environmental assessment (EA) under the *Canadian Environmental Assessment Act* (CEA Act) was completed for the Project. The Project requires a Certificate under section 52 of the NEB Act and thereby requires an EA under the CEA Act as part of the federal decision-making process for the Project. The Project was subject to a screening level of EA because it would require less than 75 km of new RoW, as defined in the CEA Act *Comprehensive Study List Regulations.*

Pursuant to the CEA Act *Regulations Respecting the Coordination by Federal Authorities of Environmental Assessment Procedures and Requirements*, the NEB coordinated Responsible Authority (RA) and Federal Authority (FA) involvement in the CEA Act EA which was conducted within the NEB hearing process. Transport Canada (TC) and the NEB are RAs, and Fisheries and Oceans Canada (DFO), Environment Canada (EC), Health Canada and Natural Resources Canada are FAs. EC, DFO, and TC declared themselves government participants in the NEB proceedings for the Project.

Throughout the EA process, the Board received submissions pertaining to Project-related EA matters, both in writing and during the oral portion of the hearing. On 1 June 2012, the Board released a draft Environmental Screening Report (draft ESR) for a 13-day public comment period. The Board received comments on the draft ESR from TC, EC and Conklin Métis Local No. 193 (CML 193) and reply comments from NGTL.

The final ESR incorporates the comments received on the draft ESR and provides the views of the Board on environmental and socio-economic matters covered under the CEA Act, as well as the Board's CEA Act determination. The final ESR is attached as Appendix V to these Reasons.

2.2.4 Life Cycle Approach

In considering the Project, the Board used a life cycle approach. All issues and concerns before the Board were considered in the context of the Project (i.e., design, planning, construction, operation, decommissioning and abandonment). The Board also considered its various regulatory roles, such as application assessment and post-decision condition compliance, with respect to each stage in the Project's life cycle.

2.2.5 Major Projects Management Office

The Major Projects Management Office (MPMO), established in 2008, is the agency within Natural Resources Canada that was created to improve the performance of the Canadian regulatory system for major natural resource projects. The MPMO indicated that the federal regulatory review process for the Project would be managed through the federal government's MPMO Initiative.

The MPMO stated that the federal government would rely on the Board's hearing process, to the extent possible, in discharging any Crown duty to consult Aboriginal groups. Following the filing of the Project Description, the MPMO identified Aboriginal groups potentially affected by the Project. The MPMO sent letters to Aboriginal groups on 15 February 2011, explaining the role of the MPMO and the process the Crown would use to identify, consider, and address potential adverse impacts of the Project on established or potential Aboriginal or treaty rights. The letters also provided contact information for Aboriginal groups that require further information on participation in the NEB process, or the Crown's duty to consult for the Project.

2.2.6 The Public Interest

In reviewing an application, the Board must consider whether the applied-for facilities are in the overall Canadian public interest. In doing so, the Board must, after carefully weighing all of the

evidence in the proceeding, exercise its discretion in balancing the interests of a diverse public. The Board has described the public interest in the following terms:

> *The public interest is inclusive of all Canadians and refers to a balance of economic, environmental, and social interests that changes as society's values and preferences evolve over time. The Board estimates the overall public good a project may create and its potential negative aspects, weighs its various impacts, and makes a decision*[1].

In making its determination regarding public convenience and necessity, the Board must rely only on the facts that are established to its satisfaction through the hearing process, and must also proceed in compliance with the principles of natural justice.

2.2.7 Motions

During these proceedings, one motion was submitted by CML 214, summarized below. The full text of the Board's response to the Motion is attached as Appendix IV to the Reasons.

On 18 April 2012, the Board received a letter from CML 214 indicating that it intended to raise as a preliminary matter the question of the extent to which the hearing will be understood by attending Chard Métis members in the absence of translation into Chipewyan Déne during the proceeding. As directed by the Board, CML 214 filed its Notice of Motion on 26 April 2012. The Motion requested the Board to provide simultaneous English-to-Chipewyan Déne translation during the oral portion of the hearing. CML 214 stated that the first language of the majority of the members of CML 214 is Chipewyan Déne.

2.3 Reasons for Decision

These Reasons for Decision provide an overview of the matters considered by the Board in reaching a decision on the Application. Details of the Board's assessment of issues identified by the Board or by parties to the proceeding are set out in these Reasons for Decision. In coming to its findings, the Board considered all of the evidence on the record in this matter. The regulatory documents on file in the GH-004-2011 proceeding are available on the Board's website, www.neb-one.gc.ca.

[1] *Pipeline Regulation in Canada: A Guide for Landowners and the Public (Revised 2010)*, NEB, Page 1.

Chapter 3

Economic Feasibility

In making its determination on the economic feasibility of a proposed natural gas pipeline and related facilities, the Board assesses the need for the pipeline, the likelihood of the pipeline being used at a reasonable level over its economic life, and the likelihood of the tolls being paid. To make this determination, the Board considers the supply of natural gas that would be available for transportation on the pipeline, any transportation contracts underpinning the pipeline, and the availability of adequate markets to receive natural gas delivered by the pipeline.

The Board considers the possibility of impacts on new or related markets, or the opportunity for new markets. As well, the Board considers the company's ability to finance the construction and ongoing operation and maintenance of the proposed pipeline. Other economic impacts of the proposed Project are addressed in Chapter 8, Environment and Socio-Economic Matters.

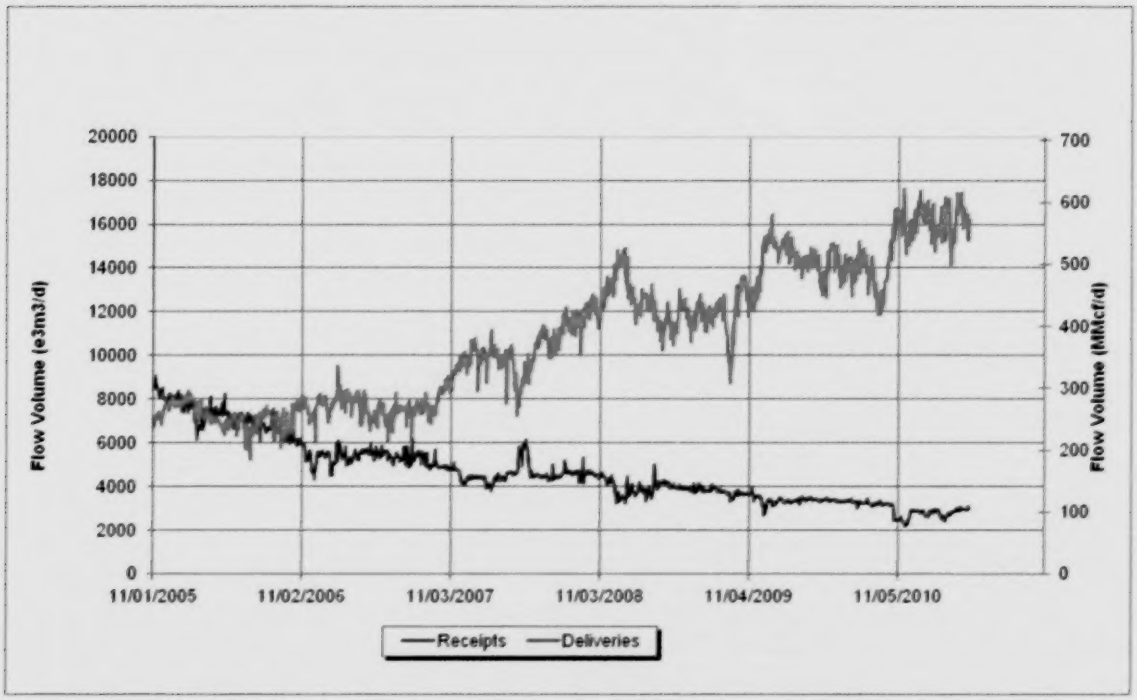
3.1 Natural Gas Supply

Views of NGTL

NGTL submitted that the applied-for facilities are required because of declining natural gas production in northeast Alberta. Gas from other parts of NGTL's integrated Alberta system is required to meet delivery requirements for in-situ oil sands projects in the Kirby area. Figure 3-1 compares receipts and deliveries in the Kirby area.

Receipts in the area have fallen from just over 280 MMcf/d in 2006 to 100 MMcf/d in 2011. During this period, deliveries in the area have increased from 280 MMcf/d in 2006 to 635 MMcf/d in 2011.

Figure 3-1
Kirby Area Receipts and Deliveries



Approximately 9.4 Bcf/d of natural gas was physically received onto the integrated Alberta system in 2010, which is adequate supply to meet local demand in Kirby. To demonstrate that there will be adequate natural gas supply for future facility requirements NGTL provided a forecast of natural gas supply for the Alberta System to 2035, shown in Table 3-1.

Table 3-1
2011 Natural Gas Supply Forecast for the Alberta System

Year	$10^6 m^3/d$	Bcf/d
2010 / 2011	289.5	10.2
2011 / 2012	297.2	10.5
2012 / 2013	312.3	11.0
2013 / 2014	328.9	11.6
2014 / 2015	352.0	12.4
2015 / 2016	366.7	12.9
2016/ 2017	375.2	13.2
2017 / 2018	380.4	13.4
2018 / 2019	383.1	13.5
2019 / 2020	382.2	13.5
2020 / 2021	381.8	13.5
2021 / 2022	377.4	13.3
2022 / 2023	374.0	13.2
2023 / 2024	368.1	13.0
2024 / 2025	382.3	12.8
2025 / 2026	356.7	12.6
2026 / 2027	350.4	12.4
2027 / 2028	344.2	12.1
2028 / 2029	338.9	12.0
2029 / 2030	332.0	11.7
2030 / 2031	324.9	11.5
2031 / 2032	318.3	11.2
2032 / 2033	311.8	11.0
2033 / 2034	306.0	10.8
2034 / 2035	300.5	10.6

Flows on the project will be sourced predominantly from NGTL's North Central Corridor pipeline, though other existing facilities and flow paths may also contribute to the project. NGTL noted that incremental markets in the Kirby area which the Project would serve, represent a significant opportunity for Western Canadian producers to sell their gas to a growing and nearby market.

Views of Parties

No intervenors questioned NGTL's supply evidence.

Views of the Board

The Board is satisfied that given the integrated nature of the NGTL system there is sufficient supply in the WCSB to support the project. The Board is

also satisfied that there will be sufficient supply throughout the forecast period.

3.2 Natural Gas Markets

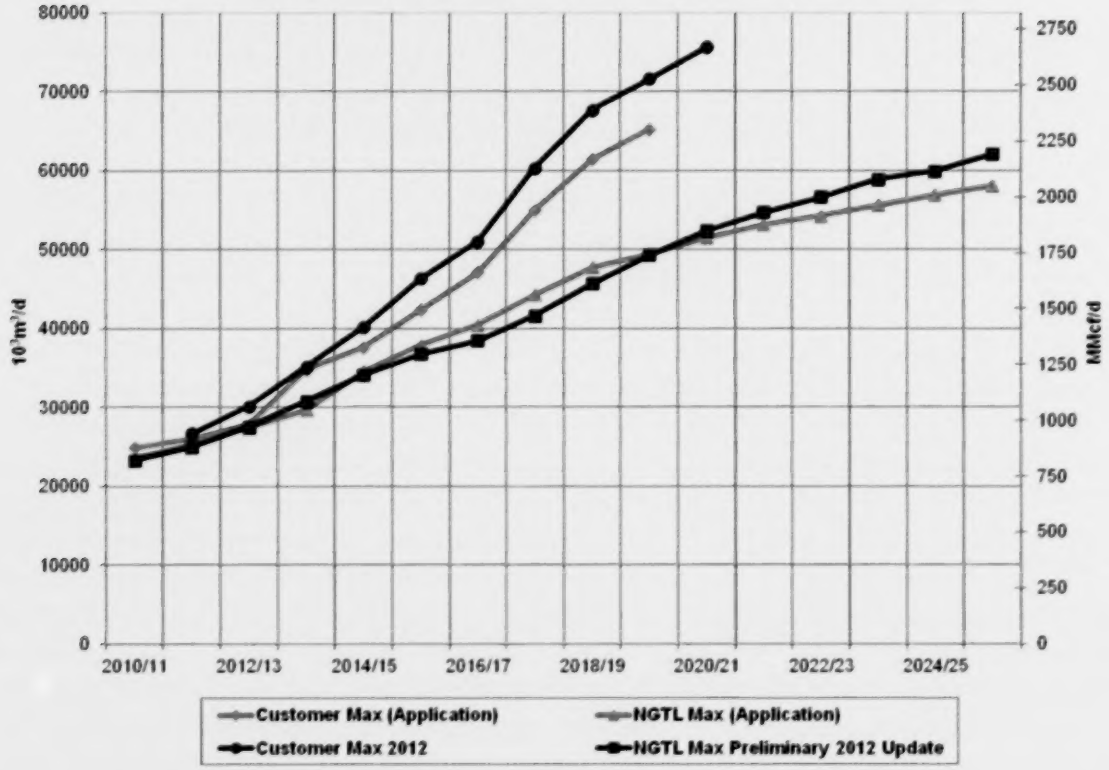
Views of NGTL

NGTL developed a forecast of gas to be delivered within the Kirby area. The primary market for the gas in this area is industrial in nature, more specifically, for oil sands development north of Cold Lake, near the Alberta-Saskatchewan border. In the Kirby area, the oil sands are too deep for mining and so the in-situ extraction methods of steam assisted gravity drainage (SAGD) and cyclic steam processes are required, both of which require natural gas.

To determine its requirements for oil sands related gas demand, NGTL stated that it develops a forecast of oil production and then determines the amount of gas required to produce that volume of oil. The resulting ratio of gas requirements per barrel of oil is known as the gas intensity. NGTL estimates of the gas intensity range from roughly 1.1 Mcf/barrel at the start of the forecast to 0.95 Mcf/barrel in 2025.

NGTL developed forecasts of maximum day deliveries for each meter station within the Kirby area at the time of the application and provided a preliminary 2012 update to the data. Figure 3-2 shows the aggregate demand of all delivery meter stations in the area and illustrates that the peak demand for deliveries of natural gas by the end of the forecast period 2025/26 is over 2 Bcf/d.

Figure 3-2
Kirby Area Maximum Day Delivery Forecast



Views of Chard Métis Local 214

CML 214 argued that there is no pressing need for the Project. CML 214 stated that the Applicant's supply and demand forecasts were premised on a static situation for natural gas markets and that no account was taken for:

- Increasing gas prices resulting from access to overseas markets through LNG exports;
- Improved efficiencies for SAGD production over the forecast period.

Views of the Board

The Board is satisfied that there is sufficient market and demand for the gas that would be transported on the applied-for facilities. The Board notes that market contract demand is even higher now than first anticipated. The Board accepts that if there were delays in implementing the project this would result in a shortfall of approximately 152 MMcf/d by April 2013 which could potentially result in the curtailment of some oil sands projects. The Board has considered the submission of CML 214 about the premise of the Applicant's supply and demand forecast. On the basis of

NGTL's evidence, the Board is of the view that there is growing demand for natural gas in the Kirby area that demonstrates a need for the Project.

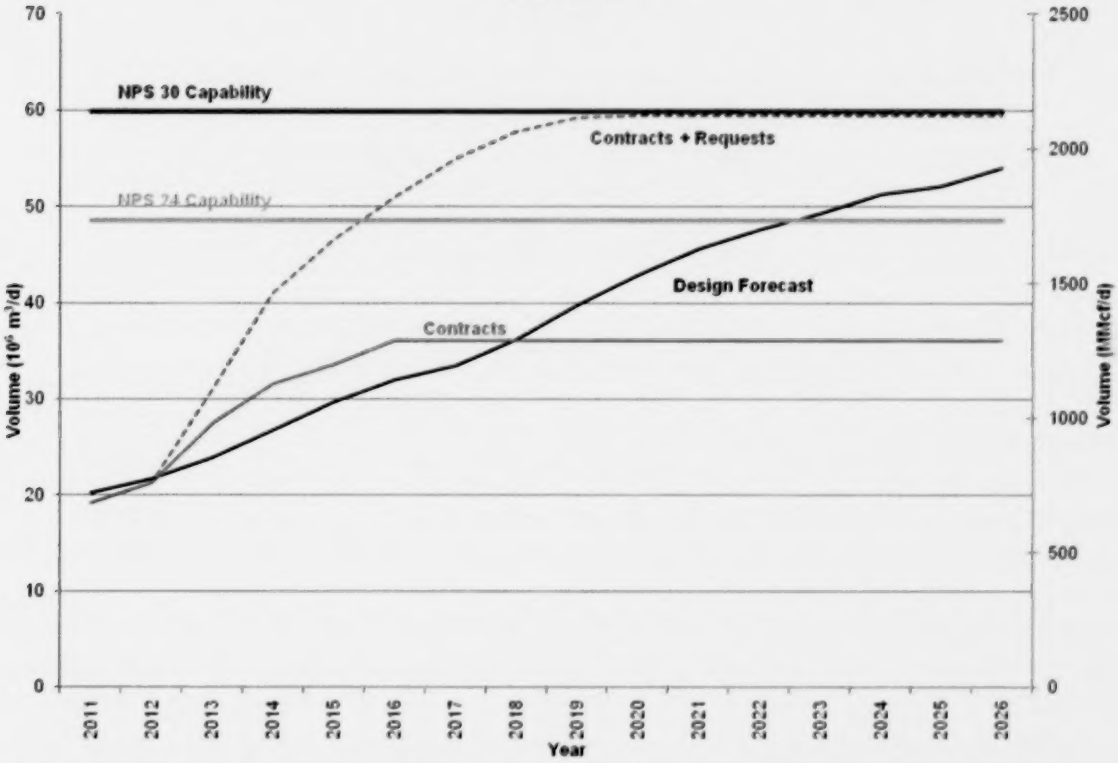
3.3 Transportation and Throughput

Views of NGTL

NGTL noted that the Project was first identified in the NOVA Gas Transmission Ltd. 2010 Annual Plan, which identified facility additions it anticipated applying to the Board for. Specific reference to the Project was made in Chapter 2 of the Annual Plan entitled "Design Flow Requirement and Proposed Mainline Facilities" and it was later presented to NGTL's Tolls, Tariff, Facilities, and Procedures Committee (TTFP) in November 2010. NGTL noted that Kirby area customers currently have executed contracts for 1,362,880 GJ/d and customer requests for future firm service of 883,650 GJ/d. In addition, evidence was given during the oral hearing that there have been subsequent, informal requests for delivery service in the Kirby area since NGTLs preliminary 2012 update and that NGTL is currently exploring options for providing that service. Based on experience, NGTL expects that the cumulative contract demand will increase in a manner similar to the maximum day demand forecast.

NGTL provided justification for selecting the NPS 30 pipe size over NPS 24. Figure 3-3 shows the capabilities of both sizes of pipe as well as a revised design forecast based on data that has been updated since the application's filing date. The figure shows that the capability of the NPS 24 alternative would be exceeded in the 2023 timeframe, requiring pipeline looping.

Figure 3-3
Pipeline size alternative capabilities, contracts, contract requests and design forecast



To further justify its assertion that the NPS 30 alternative was the right choice for the Kirby area, NGTL provided Table 3-2 below. The table shows the annual utilization percentage for the Kirby area and is based on average annual flow rates. The project design is based on peak day conditions.

Table 3-2
Annual Utilization Percentage

Year	NPS 30	NPS 24
2014	10	37
2015	27	43
2016	65	97
2017	63	89
2018	67	90
2018	68	90
2020	70	91
2021	71	93
2022	73	96
2023	75	96
2024	74	97
2025	77	97
2026	79	98

As shown in Table 3-3, NGTL stated that the Project will become a critical component of the overall infrastructure that is required in the Kirby area, reaching 50 per cent of net flow requirements of customers in the Kirby area.

Table 3-3
Net Flow Percentage Kirby Area 2013-2025

Year	Percentage
2013	21
2014	23
2015	25
2016	32
2017	29
2018	33
2019	34
2020	43
2021	42
2022	44
2023	46
2024	48
2025	50

NGTL pointed out that it is unaware of any mitigating circumstance such as an alternate fuel that could be used in place of natural gas. Without the Project, it is likely that these customers would need either to restrict their development plans or pursue alternative gas pipeline projects of their own to meet their requirements. NGTL also stated that those incremental gas volumes necessary through projects such as the applied-for facilities provide a market for Western Canadian natural

gas producers at a time when WCSB natural gas is being displaced from the markets it traditionally served.

In addition to the applied for facilities NGTL also outlined in its application the long term facility additions required to meet the design flow forecast above. The facilities, estimated at a cost of about $500 million, include both additional pipelines as well as compression as illustrated in Table 3-4.

Table 3-4
Long Term Facility Requirements

Year	Pipe	Compression
2012/13	79 km NPS 30	-
2016/17	14 km NPS 24	-
	12 km NPS 24	-
2017/18	26 km NPS 24	-
2019/20	31 km NPS 24	15 MW
2022/23	27 km NPS 24	15 MW
2024/25	-	15 MW
		4 MW

Views of Parties

No intervenors questioned NGTL's supply evidence.

Views of the Board

The Board is satisfied that there is a reasonable alignment of design capacity of the NPS 30 inch pipeline with the expected long-term utilization of the Project. The Board accepts that this Project is a critical component of the infrastructure required in the Kirby area.

The Board notes that NGTL has executed contracts exceeding 1.2 Bcf/d by May 1, 2016. The Board also recognizes that NGTL relies, to some extent, on the assumption that contracts will be renewed at the end of their terms as well as additional requests for firm service from potential shippers to demonstrate the need for the facilities and its economic feasibility of the Project. The Board accepts NGTL's partial reliance on criteria other than firm service contracts based on expected demand in the region. However, in order for potentially affected parties to stay current with evolving market conditions in the Kirby area, the Board requires NGTL to continually monitor actual transportation contracts as compared to the contracting assumptions relied upon in this application, for this Project and future related projects, and report the results to the Board in the annual surveillance reports for the Alberta System.

In summary, having considered all evidence relating to supply, demand, transportation and throughputs, the Board has determined that the applied-for facilities are required, that they will be used at a reasonable level over their economic life and that the Project is economically viable.

3.4 Ability to Finance

Views of NGTL

NGTL estimated the capital cost of the applied-for facilities to be $157 million and stated that it would obtain the funds required for construction of the Project from its parent company, TransCanada. TransCanada, in turn, would source the required funds from a combination of internally-generated cash flow and financing from Canadian and United States capital markets. TransCanada currently generates approximately three billion dollars in annual cash flow from its operations and is rated at the "A" level by major Canadian and United States credit rating agencies.

Views of Parties

No parties raised concerns regarding either the proposed method of financing or the ability of NGTL's parent company, TransCanada, to finance the Project.

Views of the Board

The Board accepts that NGTL's parent company, TransCanada, has the ability to finance the construction of the Project and place it into operation.

3.5 Toll Methodology

Views of NGTL

NGTL proposed to establish rates for service on the Project on a rolled-in basis in accordance with the governing Alberta System rate design methodology and the approved rates. NGTL's rate design methodology determines tolls at individual receipt points and continues with NGTL's practice of rolled-in tolling for facility additions to the Alberta System.

Views of Parties

No parties presented evidence or argued against NGTL's evidence regarding toll methodology.

Views of the Board

NGTL did not seek any rulings from the Board regarding the method of tolling or tariff regulation for the Project. Accordingly, the Board is not issuing any decision regarding toll methodology, and approval of the

project should not be interpreted as an endorsement by the Board of the proposed rolled-in toll methodology.

3.6 Impact on Tolls & Shipper Engagement

Views of NGTL

The addition of approximately $16.3 million in incremental annual cost of service in 2014 would result in an increase to average full path rate of 0.4 cents per Mcf/d. Projecting out to 2025, NGTL estimates the rate impact including incremental FT-D2 volumes to be an increase of 0.3 cents/Mcf.

NGTL stated during the hearing that each year it has specific discussions with the Tolls, Tariff, Facilities and Procedures Committee (TTFP) regarding the facilities that NGTL intends to apply for in the upcoming year. The company stated that the TTFP did not raise any concerns with NGTL's approach of proposing additional facilities when there is an incremental need with contracts underpinning those facilities. NGTL submitted that it had discussed and clarified the issue of the direct incremental revenue falling short of covering the cost of service for this project with the TTFP. NGTL stated that this was acceptable to the industry and was part of the rate design settlement. Regarding the Project, NGTL stated that the company did not discuss specific details with the TTFP regarding the longer term plan beyond indicating the possibility of additional looping and compression to meet future demand.

Views of Parties

No parties presented evidence or argued against NGTL's evidence regarding the impact of the Project on tolls or shipper engagement.

Views of the Board

The Board notes that the toll impact of the Project is estimated to be approximately 0.3 cents/Mcf.

NGTL provided evidence about future incremental facilities in response to questions posed by the Board. In future applications the Board expects NGTL to identify and describe, to the extent possible, the consequential facilities required. This should also include capital costs and toll impact of these related projects or activities consistent with the long term economic, financial and engineering assumptions made in support of applied-for facilities. The Board expects NGTL to do so even if applications for such consequential facilities have not been made or plans have not been finalized. This would be useful to the Board and to all parties when considering project scope and impact.

Chapter 4

Facilities and Emergency Response Matters

The Board uses a risk-informed approach in requiring that NEB-regulated facilities and activities are safe and secure from their initial construction through to their eventual abandonment. In consideration of the safety and security of proposed facilities, the Board assesses at a conceptual level whether or not the facilities are appropriately designed for the properties of the product being transported, the range of operating conditions, and the human and natural environment where the facilities would be located. Specific considerations include the company's approach to engineering design, integrity management, security and health and safety.

When a company designs, constructs, operates or abandons a pipeline, it must do so in accordance with the NEB's Onshore Pipeline Regulations, 1999 (OPR-99), the commitments made during the hearing and the conditions attached to any approval. OPR-99 references various engineering codes and standards including Canadian Standards Association Z662 Oil and Gas Pipeline Systems (CSA Z662). The company is responsible for ensuring that it follows the design, specifications, programs, manuals, procedures, measures and plans developed and implemented by the company in accordance with OPR-99.

4.1 Design, Construction and Operation

In discharging its regulatory oversight responsibilities, the Board uses a risk-informed compliance verification approach so that companies identify and manage integrity-related hazards that may impact safety and the environment throughout the life cycle of a project.

The adequacy, implementation, and effectiveness of a company's commitments are typically verified by the Board through audits, inspections, and meetings. In addition, the Board may perform ongoing monitoring of a company's compliance and incidents. This compliance approach is an integral part of the Board's continuous oversight of a company's pipeline and facilities. Accordingly, the Board will employ its normal compliance verification approach as a means of verifying that the company is meeting both its legal obligations and the commitments outlined in the GH-004-2011 proceeding.

4.1.1 Design

The Project facilities, as described in Chapter 2, consist of approximately 77 km of 762 mm (NPS 30) outside diameter (OD) pipe and related facilities from a tie-in at the existing Leismer compressor station and into the existing 273.1 mm (NPS 10) OD Kettle River Lateral and the existing 406.4 mm (NPS 16) OD Kettle River Lateral Loop. Of the 77 km, 28.8 km will be contiguous to an existing right-of-way. NGTL proposed to use grade 483 pipe for all sections of the pipe line. Heavy wall pipe will be used for river and railroad crossings. The pipeline would have a maximum operating pressure (MOP) of 9930 kPa. The pipe specifications can be found in Table 4-1.

Table 4-1
Pipe Specifications

Location / Application	Estimated Length (m)	Outside Diameter (mm)	Pipe Grade (MPa)	Wall Thickness (mm)
Line Pipe	71 000	762	483	9.8
Heavy Wall Pipe	5 365	762	483	13.1
Heavy Wall Pipe (railroad crossings)	635	762	483	15.8

NGTL submitted that the Project would be designed, constructed, and operated in accordance with the OPR-99, CSA Z662, and all other applicable acts, codes, and regulations.

4.1.2 Construction

NGTL indicated that it would develop and implement a construction safety program for the construction of the Project. Construction would be supervised and inspected to ensure compliance with all applicable regulations, standards and codes. NGTL submitted that TransCanada's proprietary quality management system (QMS) would be used for design, procurement, material supply and construction.

4.1.3 Operation

NGTL stated that health, safety and environmental performance would be addressed using TransCanada's Health, Safety & Environment Management System, which would apply to the entire life cycle of the project.

To address both routine and non-routine pipeline system maintenance, NGTL proposed the use of the applicable TransCanada Operating Procedures. The procedures describe how the work is to be accomplished, identify competency and documentation requirements, and provide references to applicable health, safety and/or environmental requirements.

NGTL stated that the facilities would be monitored and controlled through the TransCanada Operations Control Centre (OCC), located in Calgary, Alberta. The OCC uses a computer-based supervisory control and data acquisition system to continuously monitor and control pipeline operation including valves, compressor and metering facilities. The OCC is staffed 24 hours a day, but in the event that it becomes unavailable, a Backup Control Centre is available at all times.

4.1.4 Security

Construction and operation of the Project would be governed by TransCanada's overarching corporate security policy and related operating procedures. The policy would require that a security assessment be conducted, and that a Project-specific security management plan be developed and implemented.

The OPR-99 and the Proposed Regulatory Change 2010-01 outline the Board's expectation for a Pipeline Security Management Program.

Views of the Board

The Board is satisfied that the general design of the Project is appropriate for its intended use. The Board requires NGTL to construct and operate the Project in accordance with the commitments made and the specifications, standards, and other information referred to in its application or as otherwise agreed to during questioning or in its related submissions (Condition 2). In addition, the Board requires NGTL to create and maintain a Commitments Tracking Table (Condition 6) to reflect commitments made throughout this proceeding.

The Board is of the view that construction practices must address safety considerations. To facilitate the ongoing review by the NEB of NGTL's safety plans and performance, the Board requires NGTL to submit a construction safety manual for the Project, as required by section 20 of the OPR-99 (Condition 5b) and a security management plan 14 days prior to construction (Condition 5e). Additionally, the Board requires NGTL to submit a construction schedule and monthly construction progress reports (Conditions 4 and 13, respectively).

4.2 Pipeline Integrity

A management system, in general, is a framework of processes and procedures used by an organization to fulfill its objectives. It would normally contain elements such as accountabilities, procedures for tasks, and tools for auditing and continuous improvement. Programs for integrity management may be part of a company's overall management system, or may be one of a series of independent programs. The primary goal of an Integrity Management Program (IMP) is to prevent leaks and ruptures caused by in-service degradation of the pipeline.

NGTL submitted that TransCanada's IMP would be used to monitor and ensure the integrity of the project. The principal objectives of the IMP are to:

- ensure the safety of the public and employees;
- reduce environmental impacts;
- protect the installed pipelines and facilities; and
- maintain reliability.

Therefore, NGTL employs a regular preventative maintenance program, which includes aerial patrols, in-line inspection, monitoring of cathodic protection (CP), and installation of pipeline markers at road and watercourse crossings. Mitigation activities, if necessary, are initiated based on results of risk assessments of this information.

4.2.1 Corrosion Prevention

NGTL submitted that corrosion prevention would involve three main components: coating, cathodic protection, and design for in-line inspection.

The pipe would be externally coated with fusion-bonded epoxy or abrasion-resistant coating where the pipe is to be installed using boring or drilling methods. Above-ground assemblies would be primed and painted.

An impressed current CP system will be installed. The system will include groundbeds and rectifiers as determined during detailed design. Where required, CP test points will be installed along the pipeline and at road, foreign pipeline and utility crossings. These will allow monitoring of the effectiveness of the operation of the CP system.

The Project has been designed to accommodate in-line inspection tools, although launching and receiving facilities would not be installed as part of this Project. To accommodate the potential future installation of a launcher/receiver for in-line inspection, a valve and blind flange will be installed at NW ¼ Section 35-80-6 W4M.

Views of the Board

Management Systems

The Board expects companies to develop and implement management systems that set out policies, processes and procedures for the planning and execution of the core business of the organization. The management systems must incorporate programs such as safety and integrity management.

Integrity Management Programs

The Board is satisfied with NGTL's integrity management approach to surveillance and condition monitoring of its pipeline system. The Board is also satisfied that the corrosion prevention measures are appropriate for the Project.

The Board requires companies to develop and implement an IMP to proactively identify and mitigate any potential hazards to the pipeline and facilities. The Board expects any IMP to be a continuous improvement process to be used throughout the life cycle of the pipeline.

The Board requires that NGTL file its field joining program for the Project with the Board 14 days in advance of joining activity (Condition 5a). Additionally, NGTL's pressure testing program must be filed 14 days in advance of pressure testing (Condition 5c).

The Board will apply its normal compliance verification approach to ascertain whether and how NGTL complies with its IMP and that NGTL

proactively identifies and effectively manages integrity-related hazards that may impact safety and the environment throughout the life cycle of the Project.

4.3 Emergency Preparedness and Response

On 24 April 2002, the NEB issued a letter to all oil and gas companies under its jurisdiction entitled "Security and Emergency Preparedness and Response Programs". The letter set out the NEB's expectations for appropriate and effective Emergency Preparedness and Response (EPR) programs. The NEB expects companies to develop and implement EPR programs for all aspects of their operations.

NGTL stated in its application that emergency management during construction and operation of the pipeline would be governed by TransCanada's overarching corporate Emergency Management System. NGTL noted that coordination with emergency response agencies would be undertaken to ensure that appropriate communications, understanding and cooperation are in place in case of an emergency.

In the event of an emergency, such as a pipeline break, low pressure detectors on block valves would cause the valves to close, isolating the pipeline segment. Pipeline pressure would be monitored through the OCC.

NGTL stated that TransCanada's Integrated Public Awareness (IPA) program, which provides information to the public including the location of facilities and steps to be taken in the event of an emergency, would be adopted for the Project. NGTL further stated that the IPA program would take effect once the Project is in operation.

Views of the Board

The Board finds that the measures proposed by NGTL to deal with emergency preparedness and response are appropriate. The Board reminds NGTL that it must submit updates to its EPR program as required by section 32 of the OPR-99 (Condition 5d).

Chapter 5

Land Matters

The Board reviews the adequacy and completeness of an applicant's project description and the documents associated with land rights, land acquisition and land area. In order to ensure that the Board has the best possible evidence before it with respect to land matters, the Board's Filing Manual sets out specific filing requirements.

5.1 Land Rights and Land Acquisition Process

NGTL submitted that the Project would be located on Alberta provincial Crown land for its entire length except for approximately 40 m where it crosses a Canadian National Railway (CNR) RoW.

NGTL also submitted that land rights for Alberta provincial Crown lands are acquired through application for land disposition to Alberta Sustainable Resource Development (ASRD) which includes licenses and permits to enable construction of the pipeline and permanent facilities and permits for temporary land use. NGTL will apply for these rights by the second quarter of 2012.

NGTL indicated that it has a Master Utility Agreement (MUA) with CNR in place dated 1 December 1996 which covers crossing of the railway. In addition to the MUA, NGTL will also acquire a RoW agreement for the CNR portion of the proposed route.

NGTL stated that it will obtain the necessary agreements and approvals from each third party owner in cases where the proposed pipeline crosses other existing linear facilities or road access is required.

5.2 Land Area Requirements

NGTL submitted that the Project requires a minimum construction RoW width of 32 m and noted that in areas where it is able to parallel existing disturbances, it can make use of existing RoW and thereby reduce the amount of new construction RoW.

The width of the new land required for the construction RoW would vary from approximately 21 m to 32 m. The estimated land area required for permanent RoW is 226 hectares (ha) with a further 38 ha needed for temporary workspace (TWS). NGTL further added that additional TWS may be required on a site-specific basis following an assessment by NGTL and the contractor.

NGTL stated that TWS would be required at some locations to accommodate burial depth, crossings, pipeline bends, surface material depth and stripping procedure, timber clearing and storage, safety, and access and egress. TWS would be returned to the Alberta provincial Crown after construction, cleanup, and reclamation.

NGTL submitted that no new access is proposed to support construction and operation of the Project.

Views of the Board

The Board finds the lands rights documentation and acquisition process proposed by NGTL to be acceptable.

The Board also finds that NGTL's anticipated permanent and temporary land requirements for the Project are reasonable and justified.

Chapter 6

Public Consultation

The Board's expectations around public consultation are primarily set out in the Board's Filing Manual, O&M Guidelines and in the Board's Draft Expectations – Public Involvement Program. These expectations are based on the principle that people who may be affected by a regulatory decision, or who have a stake in the outcome, should be given the opportunity to provide relevant information and views to the decision maker before the decision is made.

This chapter addresses NGTL's public consultation program. Chapter 7 discusses Aboriginal matters, including NGTL's consultation with Aboriginal peoples.

6.1 NGTL's Public Consultation Program

NGTL designed and conducted its public consultation program, referred to as its "stakeholder engagement program", in accordance with the principles of TransCanada's community relations best practices.

NGTL's stakeholder engagement program consists of four phases:

1. Stakeholder Identification and Material Development: focused on the identification of potentially interested and affected stakeholders in the Project area and the development of engagement materials such as letters, maps, and fact sheets, to be used for Project notification purposes.
2. Initial Stakeholder Notification: focused on the initial public disclosure of the Project and the solicitation of stakeholder input with activities such as advertising in local newspapers, mail outs, and responding to inquiries and following up with stakeholders as required.
3. Ongoing Stakeholder Engagement and Regulatory Filings: ongoing stakeholder communication and engagement to continue to provide Project updates, solicit input, address and resolve issues and advise stakeholders about the process to provide comments to the Board.
4. Post-Filing through Construction: continues through the regulatory review process and the completion of construction and includes providing updates for stakeholders, responding to inquiries, resolving emerging issues, and continuing to communicate with all stakeholders.

Upon completion of construction and when operations commences, stakeholder engagement and issues resolution activities would be transitioned to TransCanada's Wildrose operating region in northern Alberta.

NGTL commenced its public consultation program for the Project in July 2010. Initial Project notification occurred through telephone calls, newspaper advertisements, and an informational mail-out to all stakeholders potentially interested in the Project. Beginning in October 2010,

NGTL conducted face-to-face meetings, telephone calls, Project advertising, and multiple mail-outs with Project information. Updated information was provided in November 2010, March 2011 and May 2011. Additional newspaper advertising took place in November 2010 and June 2011. NGTL continued consultation activities during the Board's regulatory process, and committed to making itself available to meet with stakeholders throughout the course of the Project.

NGTL also contacted outfitters by mail and telephone. It interviewed 14 of the 20 outfitters identified. The company committed to contact outfitters and provide an updated construction schedule at least two weeks prior to construction. Nine of the outfitters interviewed had no concerns as the construction schedule did not overlap hunting season. The other five outfitters felt that there could be negative impacts on them as a result of increased access and traffic/wildlife accidents.

Letters were sent to the holders of Registered Fur Management Areas (RFMA) on three occasions. Discussions took place with a member of Chipewyan Prairie Dene First Nation (CPDFN), who holds a RFMA, and no Project-specific issues were identified. NGTL committed to ongoing consultation with trappers and providing compensation for negative effects. NGTL indicated that there is an unoccupied cabin and a seasonal use cabin within the RSA, but not within 1.5 km of the RoW.

NGTL noted that Fort McMurray First Nation #468 (FMFN 468) Elders were concerned that the proposed route may impact woodland caribou and should be moved to the north. A subsequent meeting between NGTL, FMFN 468 and ASRD determined that the proposed route was preferable to a more northerly route alternative in terms of potential impacts on woodland caribou.

6.1.1 Consultation with Government Authorities

NGTL contacted elected officials, provincial and federal government departments, the County of Lac la Biche and the Regional Municipality of Wood Buffalo (RMWB) to provide Project information and updates and to meet as required. Consultation with ASRD and EC has taken place with respect to woodland caribou and other environmental matters.

Views of the Board

The Board considers that NEB-regulated companies have responsibilities related to respecting the rights and interests of those who may potentially be affected by proposed projects. The Board continues to expect companies to initiate public consultation programs as soon as possible in the planning and design phase of a project, to provide clear, relevant and timely information to potentially affected persons or groups, to be responsive to the needs, input and concerns of potentially affected parties, and to continue engagement throughout the life of the project.

The Board is of the view that NGTL has provided sufficient information to allow stakeholders to become aware of the proposed Project and its

potential effects, and has provided opportunities for parties to make their concerns known, either directly to NGTL or through the Board's public hearing process.

The Board also acknowledges NGTL's commitment to continue its public engagement program throughout the life of the Project. The Board finds that NGTL's consultation program is appropriate for the setting, nature and magnitude of the Project.

Chapter 7

Aboriginal Matters

The Board takes Aboriginal interests and concerns into consideration before it makes any decision that could have an impact on those interests. Whenever a project has the potential to impact the rights or interests of Aboriginal groups, the Board obtains as much evidence as possible in that regard so that it may assess and consider the potential impacts in its final decision. The Board relies on its Enhanced Aboriginal Engagement (EAE) initiative, as described below, and its hearing process, so that its records are as complete as possible.

Before filing a project application, proponents are required by the Board's Filing Manual to identify, engage and consult with potentially affected Aboriginal groups. The Board's Filing Manual requires applicants to consult with potentially impacted Aboriginal groups early on in the project planning and report on these activities to the Board. Further, the Filing Manual requires that an application include detailed information on any issues or concerns raised by Aboriginal groups or that are otherwise identified by the applicant.

Aboriginal groups are encouraged to engage with proponents so that their concerns are identified early, considered by the proponent, and potentially resolved before the application is filed. The Board also encourages Aboriginal groups with an interest in a project to participate in the hearing process in order to make the Board aware of their views and concerns. There are various ways for Aboriginal groups to participate. These can include letters of comment, oral statements, written evidence, oral testimony by elders and members of Aboriginal groups, cross-examination of the project proponent and other parties, and final argument.

7.1 The NEB's Enhanced Aboriginal Engagement Process for the Leismer to Kettle River Crossover Project

The Board's EAE initiative aims to provide proactive contact with Aboriginal groups that may be affected by a proposed project, and to help Aboriginal groups understand the Board's regulatory process and how to participate in that process. The Board reviews the completeness of the list of potentially affected Aboriginal groups identified in the proponent's Project Description filed with the MPMO. The Board may suggest to the proponent any necessary revisions. The Board then sends letters to each potentially impacted Aboriginal group on the revised list, informing them of the project as well as the Board's regulatory role in respect of the project, and offers to provide further information on the hearing process. Following issuance of these letters, Board staff follow up, respond to questions or conduct information meetings, where requested.

The NEB carried out its EAE process for the Project between the receipt of the Project Description in December 2010 and the receipt of the Project Application in July 2011. In response to the letters sent by EAE staff to 14 Aboriginal groups, NEB staff provided two information sessions on the Board's processes and its Participant Funding Program to representatives of the Chipewyan Prairie Dene First Nation as well as to Region 1 of the Métis

Nation of Alberta and a number of its Locals and organizations. These included groups identified as being potentially affected by the Project.

7.2 Participation of Aboriginal Groups in the Regulatory Process

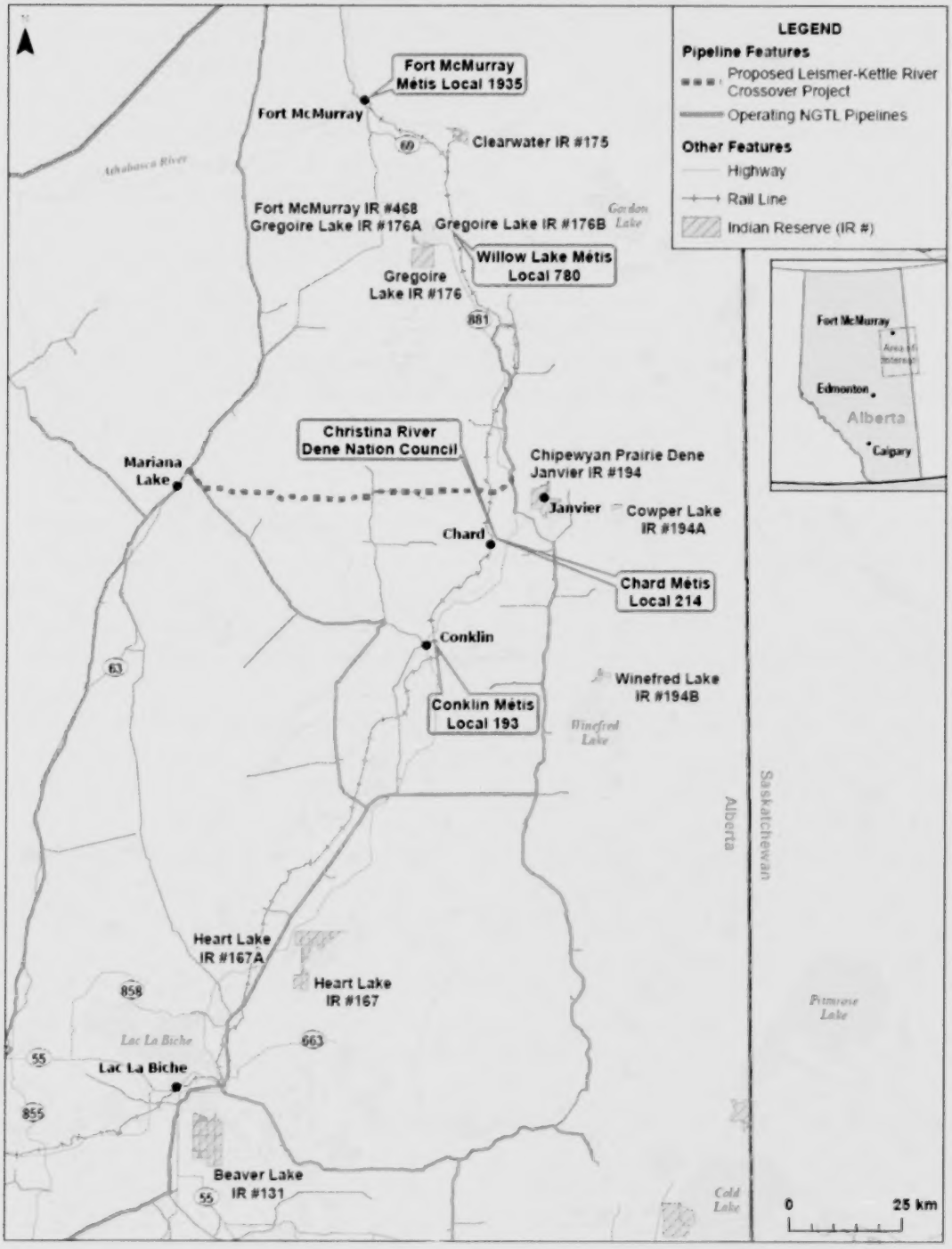
As set out in Table 7-1, three Aboriginal groups were granted Intervenor status and participated in the GH-004-2011 proceeding. The locations of Aboriginal Intervenors and other Aboriginal groups within 150 km of the Project are shown in Figure 7-1.

Table 7-1
Aboriginal Groups with Intervenor Status

Intervenor	Intervenor Status Granted	Filed Evidence	Provided Oral Evidence	Presented Witnesses	Final Argument
Chard Métis Local #214	•	•	•	•	•
Conklin Métis Local #193	•			•	•
Christina River Dene Nation Council	•		•	•	•

Prior to the filing of the application with the NEB, letters of comment were received by the Board from the Chipewyan Prairie Industry Relations Corporation and Conklin Métis Local #193.

Figure 7-1
Aboriginal Communities in Project Area



Source: Modified from Figure 11.1 submitted in NGTL's Application (filing A2A6Q0)

7.3 Aboriginal Engagement

Views of NGTL

NGTL's primary goals for its Aboriginal engagement process for the Project were to:

- identify the potential effects of the Project on the current use of the lands for traditional activities and identify and implement appropriate mitigation measures;
- identify sites of cultural and historical importance to Aboriginal people that may be affected by the Project and consider appropriate mitigation measures;
- obtain local and traditional knowledge relevant to the Project and integrate this information into the planning process; and
- establish a long-term, positive relationship with Aboriginal communities located near NGTL's facilities.

NGTL's Aboriginal engagement process for the Project was guided by the TransCanada Aboriginal Relations Policy and was implemented through the following five-step process:

1. Initial Determination
2. Community Identification and Confirmation
3. Sharing Project Information
4. Procedures for Responding to Questions, Issues and Concerns
5. Incorporating Traditional Ecological Knowledge and Traditional Land Use

NGTL developed an initial list of potentially-affected Aboriginal communities based on its research, operating experience, network of contacts with Aboriginal communities and through consultation with Aboriginal Affairs and Northern Development Canada.

A total of 15 potentially affected or interested Aboriginal groups and organizations were identified and notified of the Project:

- Athabasca Chipewyan First Nation (ACFN)
- Beaver Lake Cree Nation (BLCN)
- Chard Métis Local #214 (CML 214)
- Chipewyan Prairie Dene First Nation (CPDFN)
- Conklin Métis Local #193 (CML 193)
- Fort McKay First Nation (FMFN 467)
- Fort McKay Métis Local #63 (FMML 63)
- Fort McMurray First Nation #468 (FMFN 468)
- Fort McMurray Métis Local #1935 (FMML 1935)
- Fort McMurray Métis Local #2020 (FMML 2020)

- Heart Lake First Nation (HLFN)
- Métis Nation of Alberta Region 1 (MNA Region 1)
- Mikisew Cree First Nation (MCFN)
- Willow Lake Métis Local #780 (WLML)
- Wood Buffalo Métis Corporation (WBMC) (intermediary for CML 214 and WLML)

NGTL developed engagement activities from July 2010 and maintained engagement logs for those Aboriginal groups that expressed an ongoing interest in participating in NGTL's Aboriginal engagement process.

FMFN 467 and FMML 63 confirmed that their traditional territories are unaffected by the Project and did not need further information or engagement from NGTL. No responses were received by NGTL from ACFN, FMML 2020 or MCFN. After making initial contact with MNA Region 1 and WBMC, these organizations suggested that NGTL engage directly with Métis Locals.

NGTL provided evidence of its consultation activities with the remaining 10 Aboriginal groups:

- BLCN
- CML 193
- CML 214
- CPDFN
- FMFN 468
- FMML 1935
- HLFN
- MNA Region 1
- WBMC (intermediary for CML 214 and WLML)
- WLML

NGTL confirmed that, should the Project be approved, it would continue to follow its Aboriginal engagement process. NGTL indicated for the operations phase, it would use TransCanada's Integrated Public Awareness program and proactive approach to Aboriginal community engagement. Where agreed upon, NGTL will continue its practice of entering into a community agreement which typically includes a communication and engagement protocol and provisions for community investment.

It will continue to engage and update BLCN, CPDFN, HLFN and WLML on the project including finalizing the Traditional Land Use (TLU) work and discussing appropriate mitigation. NGTL met with CML 214 to discuss the proposed Draft Cooperation and Benefits Agreement, but has not agreed on the details of such agreement. It has entered into plans or relationships with CML 193, FMFN 468, and FMML 1935.

NGTL noted that the Christina River Dene Nation Council (CRDNC) was formed on 18 April 2012, just prior to the hearing. NGTL indicated that as soon as it learned of CRDNC's existence and its potential interest in the Project, it provided a Project information package and invited CRDNC to contact NGTL to discuss its interests in the Project.

Views of CML 214

CML 214 stated that Alberta and Canada have declined to engage in consultation with the Chard Métis in regard to the impact of the project on Chard Métis rights, and have not offered any accommodation or compensation for the loss of these rights. It expressed the view that the Project's potential impact on the rights of the Chard Métis engages the honour of the Crown and the duty of the Crown to consult and to accommodate the Chard Métis.

CML 214 indicated that NGTL did not explain that the proposed Project will be feeding gas to the oil sands plants that are adversely affecting the environment.

Views of CML 193

CML 193 indicated that it has been endeavoring since July 2010 to have NGTL initiate project engagement with Conklin in a timely manner, addressing CML 193's capacity issues and respecting the community's preferred processes. CML 193 noted that an agreement was reached and an action plan was developed in February of 2012.

CML 193 stated that it attempts to build relationships with industry and government through the Conklin Resource Development Advisory Committee (CRDAC) rather than using its limited resources to oppose projects before regulators.

Views of CRDNC

CRDNC indicated that NGTL representatives have not thoroughly discussed the project with it or with CML 214. CRDNC expressed concern that it did not have a full understanding of the construction schedule, construction methods, soil handling, site reclamation, and other issues related to the planned pipeline. However CRDNC accepted NGTL's commitment to meet with its members to discuss the Project.

Reply of NGTL

NGTL indicated that it had contacted all of the Aboriginal communities identified as being potentially affected by the project. It provided Project information and opportunities to meet with NGTL to discuss the Project and express any concerns the Aboriginal communities may have. NGTL also provided opportunities to provide input into the Project planning through Project-related field studies. It consulted with each interested community to determine how they wished to be consulted and how they wished to contribute to the Project.

NGTL indicated that it included CML 214 throughout the planning of the Project and provided numerous opportunities for CML 214 to provide input into the Project. It noted that CML 214 members provided traditional ecological knowledge (TEK) and TLU information for NGTL's Environmental and Socio-economic Assessment and were involved in a helicopter fly-over of the

Project location. NGTL concluded that its engagement with CML 214 has been fulsome and more than sufficient in the circumstances. NGTL also noted that CML 214 participated extensively in the hearing process, filing written evidence, posing information requests, filing an opening statement, cross-examining NGTL's witness panel, presenting oral evidence and submitting final argument. It concluded that the record demonstrates that CML 214 has been provided extensive opportunities to be consulted and it availed itself of those opportunities.

NGTL indicated that it had afforded CML 193 with numerous opportunities to provide input into the Project, but that CML 193 stated that it would not engage on the Project until NGTL became a member of the CRDAC. It noted that it and CML 193 agreed on a Joint Action Plan which set out a series of actions to guide the engagement, including a TLU study specific to the Project to be conducted by CML 193. NGTL indicated that it has followed the Joint Action Plan since February 2012.

NGTL noted that CRDNC was formed on April 18, 2012 and that CRDNC represents many of the same people that are purportedly represented by CML 214. NGTL reported that an agreement has been reached to meet with CRDNC after the hearing to discuss CRDNC's interests in the Project.

7.4 Incorporation of Traditional Land Use Information and Traditional Ecological Knowledge

Views of NGTL

At the time of the application, NGTL indicated that FMFN 468, WLML and CML 214 had been or would be participating in TLU studies with NGTL's consultant. CPDFN and HLFN indicated a preference to conduct their own community-directed TLU studies for the Project.

NGTL stated its ESA was based on interviews with knowledge holders from CML 214 and FMFN 468, the 2006 TLU study of the FMFN 468, a literature review of 15 regional environmental impact studies dated from 1998 to 2010, its knowledge from other NGTL projects, and the knowledge of its consultants.

NGTL stated that as of the hearing date, CML 214, FMFN 468 and WLML had participated in TLU studies with NGTL's consultant, and that NGTL was working with FMML 1935 on a Project Workplan that may include the collection of TLU information. HLFN submitted a draft of its own community-directed TLU study, and CPDFN and WLML indicated their preference to conduct their own community directed TLU studies which had commenced. As of the hearing date, CML 193 confirmed that it had completed its TLU report and that NGTL had responded to it.

NGTL indicated that it will continue to engage with and update BLCN, CPDFN, CML193, FMML 1935, HLFN and WLML on the Project, and that this will include information regarding TLU provided by these groups and discussing mitigation. NGTL also confirmed the information collected during the TLU studies is used during continued Project planning and development and is incorporated into the EPP and environmental alignment sheets for the project.

7.5 Potential Impacts to Aboriginal Traditional Land and Resource Use

In its evidence NGTL identified Project-specific concerns about potential impacts on Aboriginal traditional land and resource use and listed the mitigation it proposed for each of these potential impacts on fishing, hunting and trapping, plant harvesting and on specific TLU sites that may overlap the Local Study Area. As well, NGTL identified potential impacts on other matters of concern to Aboriginal groups including effects on caribou and their habitat, water and water crossing, and fish and other wildlife.

NGTL indicated that it recognized through its engagement process that several communities have broader concerns on topics such as regional industrial development and regional cumulative effects, regional caribou and caribou habitat, and regional water quality and quantity and stated that it is open to further discussions on these matters, notwithstanding its view that they are beyond the scope of these proceedings.

NGTL indicated that in addition to Project-specific studies it was also able to draw on its considerable experience as well as the numerous previous TLU studies that covered the Project area. It stated that as a result, it has a thorough understanding of the current use of lands by Aboriginals for traditional purposes within the Project area. Its assessment of potential effects of the Project on traditional land and resource use was based on this understanding. NGTL has proposed a variety of mitigation measures in its EPP and CPP, including using the minimal surface disturbance construction technique that will return the RoW to pre-construction conditions as soon as possible and minimize potential adverse effects of the Project.

NGTL has also committed to implement select mitigation strategies through its Traditional Land Use Sites Discovery Contingency Plan which will minimize the effects of the Project on previously unidentified site-specific traditional use sites, should any be discovered.

NGTL stated that while the Project may have short-term impacts on traditional land and resource use, the Project will not affect the ability of Aboriginal people to exercise their traditional practices across their traditional territories. NGTL concluded that the likely residual effects of the Project on traditional land and resource use will not be significant because the Project is not expected to significantly affect wildlife abundance or habitat, fish abundance or habitat, or terrestrial vegetation. It stated that by that by protecting the resources used for traditional activities, NGTL will protect the resource users as well.

In response to those who called for Aboriginal monitors, NGTL indicated that in order to fully understand the role that Aboriginal monitors could play in the Project, the matter would be discussed with Aboriginal communities.

Views of CML 214

CML 214 provided information on the resource harvesting activities of its members in and near Project lands. It identified its traditional land and resource use as including:

- hunting a number of species of wildlife within or near Project lands,
- fishing for a number of species in named water bodies and specific areas,
- the use of resources such as various types of plants and berries in specific areas, and
- cultural sites including trails, waterways and cabins.

CML 214 also indicated that the following effects could result from the Project:

- impacts on water,
- impacts on the habitat of named species that are hunted or fished, and on berries and other plants or materials that are harvested.

CML 214 concluded that the subject lands continue to be accessed by Chard Métis members who actively exercise their Aboriginal rights. It stated that its traditional activities will be adversely affected by the proposed Project notwithstanding proposed mitigation measures. However in response to an information request from the Board, CML 214 did not provide feedback with respect to the effectiveness of the proposed mitigation measures.

Views of CPDFN

CPDFN's overarching concern was for the protection of the White Muskeg, which it considers to be a unique landscape of cultural and ecological significance. It is also concerned about potential impacts on water quality, quantity and interconnectivity, caribou and lynx and the habitats of these species.

Views of CML 193

CML 193 provided initial information indicating that its traditional land and resource use includes:

- hunting a number of named species and unspecified wildlife in geographically described areas in and around the Project,
- fishing in the Christina and Kettle Rivers, noting the presence of Arctic graying in several rivers and creeks,
- harvesting a number of types of medicinal and food plants in described locations.

CML 193 indicated that its members would be directly and adversely affected by the proposed project because:

- the area is an important harvesting area that members continue to use and the impacts of the Project would result in CML 193 members having to travel a further distance to harvest,

- the area is the source waters for the Christina River and watershed and sustains all species that live in the area, and
- the Project transects an area that provides critical caribou habitat impacting the health and abundance of caribou, a species reported to be harvested.

CML 193 declined to provide the Board with any additional information on specific impacts to its traditional land and resource use following the TLU report that had been recently concluded as of the date of the Hearing.

Views of CRDNC

CRDNC indicated that the Project could impact caribou, other wildlife species, and the Christina River, the community's water source. CRDNC also indicated that it does not object to the Project, but seeks to be considered for benefits, such as contractual opportunities.

Reply by NGTL

NGTL's reply argument focused on the views CML 214 raised in its final argument. NGTL noted that while CML 214 raised general concerns about the Project effects on traditional land and resource use and NGTL's proposed mitigation, CML 214 did not provide any specific evidence of how CML 214's rights will be impacted or why the proposed mitigation measures would not be sufficient. NGTL also noted that the only specific TLU information that was provided by CML 214 indicated that the majority of the proposed pipeline would run across muskeg that is not used much for hunting.

NGTL also responded to CML 214's concern about water rights including riparian rights, arguing that even if CML 214 has rights to the water in the Project area, those rights will not be affected by the Project because there would be no residual effects on surface water or ground water.

Views of the Board

Aboriginal Engagement and Consultation

The Board requires applicants to initiate early discussions and consultation with Aboriginal groups potentially affected by a proposed project. This allows for early exchanges of information and for matters of concern to be considered at the onset of the project and through the design phase of the project. The extent of the consultation that needs to be carried out is determined to a large extent by the nature, scope and setting of a project.

The Board finds that NGTL's Aboriginal engagement program and consultation process was sufficient given the nature, scope and setting of the Project. The Board is satisfied that potentially affected Aboriginal groups were provided with sufficient information about the Project and had a fair opportunity to make their views known to the Board.

In particular, CML 193 and CML 214 participated in Board processes prior to and including the oral portion of the Hearing. While CRDNC was not previously known to NGTL due to its recent formation, the Board notes NGTL's provision of Project information and agreement to a meeting of the parties to discuss involvement in the Project. CRDNC also sought and was granted intervenor status, and it participated in the hearing process including providing oral evidence and submitting final argument. Accordingly, the Board finds that its hearing process is complete, and is satisfied that it has sufficient information to assess the environmental effects of the Project, including impacts to current traditional use of land and resources.

Crown Consultation

The Crown has indicated that it intends to rely upon the Board's public hearing process, to the extent possible, to fulfill any Crown duty to consult Aboriginal groups for the Leismer Project.

As a quasi-judicial decision-maker, the Board must ensure that its process complies with the principle of fairness and the rules of natural justice. In addition, the Board interprets its responsibilities, including those outlined in section 52 of the Act in a manner consistent with the *Constitution Act, 1982,* including section 35, which recognizes and affirms existing Aboriginal and treaty rights of Aboriginal peoples. In order to ensure that its decision is consistent with both the rules of natural justice and section 35 of the *Constitution Act, 1982,* the Board has adopted the following assessment process.

The Board's process is designed to obtain as much relevant evidence as possible on Aboriginal concerns about a project, potential project impacts on Aboriginal interests and possible mitigation measures. In addition to providing technical information addressing impacts of the project on, among other things, fisheries, wildlife, vegetation and heritage resources, the applicant is required to make all reasonable efforts to consult with potentially affected Aboriginal groups and to provide information about those consultations to the Board. This includes evidence on the nature of the interests potentially affected, the concerns that were raised and the manner and degree to which those concerns have been addressed. These requirements reflect the fact that the applicant is most often in the best position to respond to Aboriginal concerns about a project before an application is filed and while the project is still in the early stages of development.

The Board evaluates the sufficiency of the applicant's consultation process along with any other evidence of consultation it has on its record. The applicant is expected to report on all Aboriginal concerns that were expressed to it, even if it was unable or unwilling to address those

concerns. Where there is a greater risk of more serious impacts on Aboriginal interests (which will in part depend on the nature of that interest), the Board will have greater expectations in terms of the applicant's consultation with the potentially impacted Aboriginal group. By the same token, where there is a remote possibility of an impact on Aboriginal interests, or the impacts are minor in nature, the applicant's consultation will generally not be expected to be as extensive.

In addition to the one-on-one consultation that occurs between applicants and Aboriginal groups, the Board's hearing process itself is part of the overall consultative process. Aboriginal groups who are concerned with the potential impact of a proposed project on their interest may present their views directly to the Board. Such submissions may include, among other things, a description of the nature and extent of their interest in the project area, views on the potential impacts of the project and discussion of appropriate mitigation measures. There are a variety of ways Aboriginal groups may choose to present their views to the Board (e.g. intervenor, letter of comment, oral statement); Aboriginal groups can therefore choose the level of involvement they want to have in the Board's hearing process.

Given the comprehensiveness of the Board's process and the Board's broad remedial powers that are generally not within the purview of other government departments, concerns related to the project should be brought to the Board's attention through consultation with the applicant and participation in the hearing process. In those instances where a certain project-related issue may be beyond the ability of the applicant or the Board to resolve, it may be that other government bodies with the ability to address the issue will decide to consult with the Aboriginal groups in relation to that matter. To the extent that information regarding those consultations is relevant to the Board's decision (i.e. it is information that may factor into the Board's public interest determination), that information should be filed on the Board's record.

It is through this open process that the Board is able to fully understand and consider all the interests that may be impacted by the project. Further, the open nature of the Board hearing process allows for all parties interested in the application to be fully aware of the evidence that the Board will consider in its decision-making process.

Before making its decision on the project, the Board will assess the completeness of its process to ensure all potentially affected Aboriginal groups had a fair opportunity to make their concerns known to the Board. It will consider all of the relevant information before it, including information regarding the consultation undertaken with Aboriginal groups, the views of Aboriginal groups, project impacts on Aboriginal interests, including asserted and proven Aboriginal rights, and proposed mitigation measures. In assessing the potential impacts of a project and determining

whether it is in the public convenience and necessity, the Board considers the nature and extent of the Aboriginal interest in the context of how the project may affect such interests. The Board also takes into consideration proposed measures that would avoid or mitigate project impacts on Aboriginal interests. The Board then considers all of the benefits and burdens associated with the project, balancing Aboriginal concerns with other interests and factors, before determining whether the project is in the public interest.

In carrying out its mandate, the Board's objective is to reconcile Aboriginal concerns with other public interest considerations. To this end, the Board's process is designed to be thorough, open and accessible to Aboriginal groups so that they may make their concerns known to the Board through numerous different means and have those concerns considered before the Board's final decision.

Potential Impacts of the Project on Aboriginal Traditional Land and Resource Use

Aboriginal groups, including CML 214, CPDFN, CML 193 and CRDNC expressed concerns about potential Project effects on caribou and caribou habitat, harvested wildlife and plants, water and cumulative effects. The Board's views and recommendations on the effects on the environment that may impact Aboriginal groups are provided in the ESR in Appendix V. The ESR also contains the Board's views on cumulative effects.

The Board notes that although CML 214 and CRDNC held different views with respect to the Project, CRDNC's membership contains many, if not all of the members on CML 214's membership list. Further, the Board notes that CML 214, CPDFN, CML 193 and CRDNC did not provide specific information with respect to why the proposed mitigation measures would be inadequate in addressing their concerns.

The Board finds that NGTL's mitigation measures and commitments, together with the Board's conditions relating to environmental protection measures are effective strategies to mitigate the potential impacts of the Project. Therefore, the Board is of the view that any effects on Aboriginal interests, including the current use of lands and resources for traditional purposes, will be effectively addressed.

The Board notes that additional site-specific TLU information may be forthcoming from continuing TLU work and consultations with several Aboriginal groups, and that NGTL has committed to discussing appropriate mitigation and incorporating any agreed upon additional mitigation into its EPP.

The Board has imposed a condition requiring NGTL to file monthly reports during construction on consultation activities undertaken with those Aboriginal groups that NGTL will include in its ongoing consultation plans for the Project. The Board expects NGTL to summarize any issues or concerns raised and describe how they were addressed (Condition 21).

Chapter 8

Environment and Socio-Economic Matters

The Board considers environmental and socio-economic matters under both the CEA Act and the NEB Act. The Board expects applicants to identify the effects projects may have on bio-physical and socio-economic elements, identify mitigation the applicant will implement to reduce those effects, and assess the significance of any residual effects once the mitigation has been applied.

This chapter summarizes the EA process used by the NEB for the Project. It also addresses those socio-economic issues not considered under the CEA Act.

8.1 Environmental Screening Process

Throughout the EA process, the Board received submissions pertaining to Project-related environmental matters, both in writing and during the oral portion of the hearing. The EA process has been detailed in Section 2.2.3

The final ESR reflects parties' comments and the Board's assessment of the bio-physical and socio-economic effects of the Project and mitigation measures, based on the description of the Project, factors to be considered, and the scope of those factors. The ESR also includes an evaluation of the likelihood of significance for any adverse effects and includes recommendations for conditions to be included in any Board regulatory approvals.

Views of the Board

With respect to its regulatory decision under the NEB Act, the Board has considered the CEA Act ESR and the recommendations included therein. Key issues addressed by the Board in the ESR include species at risk, caribou and caribou habitat, cumulative effects and the traditional land use within the Project area. The Board determined in the ESR that, with the implementation of NGTL's environmental protection procedures and mitigation measures and the Board's recommendations, the proposed Project is not likely to cause significant adverse environmental effects. Further, with respect to caribou, the Board determined that a follow-up program pursuant to the CEA Act is appropriate, which will require NGTL to monitor, verify and report on the effectiveness of habitat restoration and offset measures. The Board has converted the recommendations contained in the ESR into conditions of its approval.

For details regarding the Board's assessment of the environmental and socio-economic effects evaluated pursuant to the CEA Act, the reader is referred to the ESR. Copies of the ESR are available in Appendix V of these Reasons, in the NEB library or on-line within the Board's Regulatory Documents index, at www.neb-one.gc.ca.

8.2 Socio-Economic Matters

The Board expects companies to identify and consider the impacts projects may have on socio-economic conditions including the mitigation of negative impacts and the enhancement of project benefits.

Potential socio-economic effects covered by the CEA Act are addressed in the ESR. The CEA Act contemplates indirect socio-economic effects caused by a change to the environment as a result of the Project. Direct socio-economic effects caused by the existence of the Project itself are considered under the NEB Act and are discussed below.

8.2.1 Infrastructure and Services

Views of NGTL

NGTL reported that no issues or concerns relating to infrastructure and services had been raised by municipal representatives or the general public.

NGTL predicted that the residual effects on infrastructure and services as a result of construction and operation of the pipeline would include the following:

- increased traffic on highways and local roads;
- temporary increase in waste flow; and
- change in the demand for existing emergency services.

NGTL indicated that there will be increased traffic volumes along major highways and local roads during construction. NGTL proposed mitigative measures, including using multi-passenger vehicles to transport construction workers to the Project work site, and implementing and enforcing Project-specific traffic, road-use, and safety protocols.

NGTL stated it will reduce waste quantities to the lowest levels practical through Project design. All waste generated during construction will be stored in designated animal proof containers and hauled to appropriate landfill sites for disposal.

NGTL stated that it is committed to building the pipeline in a safe and responsible manner. It indicated that during construction, strategies such as the Emergency Response, Spill Contingency and Fire Contingency plans, and the use of the STARS air ambulance service will be in place to reduce the likelihood of an incident occurring, and to avoid the requirement for community emergency services.

NGTL also indicated that surface water withdrawal will not be required for the Project's camp facilities. Potable water supply will be trucked in from existing sources within the RMWB or Lac La Biche County.

NGTL predicted that the socio-economic effects of the Project on infrastructure and services are not significant given the proposed mitigation.

Views of CPDFN

CPDFN expressed its concern about the Project's impact on the Christina River. CPDFN stated that it would further discuss this concern with NGTL through planned TLU investigations.

Views of CML 193

CML 193 expressed concerns about NGTL's protocols for workers' after-work recreational activities and how they will be enforced in order to reliably prevent disruptive behavior by workers in the community. It also had concerns about increased traffic.

CML 193 also expressed concern about emergencies during construction, operation and abandonment of the pipeline and whether NGTL had prepared a site-specific emergency response plan.

Reply of NGTL

NGTL stated that the presence of transient workers in nearby communities is expected to be low as construction crews will be housed in camps and construction will only occur over a five month period. NGTL stated it does not have a policy on worker behaviour outside of work hours and away from camp. NGTL's Code of Conduct and Drug and Alcohol policy will be implemented. NGTL stated that it will discuss specific concerns related to Project workers as part of its ongoing engagement with local communities and will implement additional mitigation as necessary.

NGTL confirmed that it did not anticipate an increased amount of traffic on Highway 881 as a result of the project given its proposed use of an existing construction camp off Highway 63 and the fact that the primary access for the project will be along the RoW with construction beginning in the west and moving to the east. NGTL indicated that it would discuss the traffic issue with CML 193.

NGTL stated that a site-specific ERP will be prepared by the pipeline construction contractor once the work has been awarded. It indicated that the Project will be incorporated into TransCanada's Regional Emergency Response Plan when the pipeline is in operation.

8.2.2 Employment and Economy

NGTL stated that skilled labour for the Project is expected to be drawn primarily from Fort McMurray and Edmonton due to their larger labour pools. Project labour may also be obtained from the smaller communities located closer to the Project such as Conklin, Janvier and Janvier Indian Reserve 194.

The Project will contribute primarily short-term labour expenditures in the form of local construction employment opportunities during the five-month construction period. Peak worker requirements are expected to last approximately two months. NGTL's Aboriginal Economic Participation Program encourages contractors to involve Aboriginal populations in the labour force. As a result, it is expected that there will be hiring from some of the Aboriginal communities in the local area.

NGTL stated that the predicted residual effects on employment and economy associated with the construction and operation of the pipeline would include a modest increase in local employment opportunities and a modest increase in annual revenue for municipal governments.

NGTL anticipated that local, regional, and Aboriginal businesses and individuals will participate to some extent in the Project by providing various goods and services, and will realize modest economic benefits from the Project's construction.

NGTL stated that it recognizes the importance of providing opportunities for local participation and employment in its projects. NGTL also endeavours to create both short and long-term employment opportunities for Aboriginal people affected by Project activities, as well as supporting learning opportunities for Aboriginal people to increase the capacity of Aboriginal communities. Aboriginal businesses with expertise that may be needed have been identified. NGTL will seek to provide such Aboriginal businesses with an opportunity to participate through its Aboriginal Economic Participation Program.

Views of CML 214

CML 214 raised concerns regarding the implementation of commitments made by resource developers with respect to employment and contracting opportunities. It asserted that no opportunities were available to Chard residents from a previous recent project in the area, with the exception of a small Chard company receiving economic benefits through clearing contracts for geo-technical work.

Views of CML 193

CML 193 queried whether Métis workers and businesses from Conklin would be used on the Project. It also sought an explanation of how NGTL's Aboriginal Participation Program specifically encourages the employment of Aboriginal people. CML 193 also queried whether NGTL has a work set-aside policy for Aboriginal communities and a specific policy or set of practices to enhance the capability of Aboriginal businesses.

CML 193 stated that it has determined that working with industry is the best way to derive some benefit from the development and to reduce the impact of development. It expressed optimism that upcoming negotiations with NGTL would lead to a mutually beneficial long-term relationship.

Views of CRDNC

CRDNC indicated that it is not objecting to the Project, and is seeking an opportunity to be a part of it. It expressed its interest in bidding on contracting opportunities for Project work. Both NGTL and CRDNC indicated that a meeting would be scheduled following the hearing to discuss potential participation in the Project.

Reply of NGTL

NGTL indicated that it follows TransCanada's Aboriginal Policy and strives to create short and long-term employment opportunities for Aboriginal people impacted by its activities. It stated that it will engage Aboriginal communities regarding potential economic development opportunities associated with the Project.

NGTL stated that it will encourage its Project prime contractors to identify and employ local Aboriginal people and businesses from Aboriginal communities potentially affected by the Project, but does not explicitly direct its prime contractors to hire specific business or individuals and NGTL does not guarantee work to any individual or business.

NGTL indicated that it will implement its established program for Aboriginal contracting and employment for the Project. NGTL does not have a "work set-aside" policy or a specific policy to enhance the capability of Aboriginal businesses affected by its projects. NGTL advised that it keeps track of all the "Aboriginal spend" on every project and reports internally on that quarterly. NGTL also described how it continues to build positive relationships with Aboriginal communities through its community capacity development and community investment programs.

Views of the Board

NGTL has committed to develop and implement plans to address the Project's potential socio-economic impacts, including the use of an existing camp near Highway 63 to reduce predicted increases in traffic on Highway 881. NGTL has also committed to continue its consultation with stakeholders and Aboriginal groups to address concerns that may be raised, to provide updated Project information, and to address concerns that may be expressed.

The Board supports NGTL's commitment to provide, where possible, local and Aboriginal employment and business opportunities. NGTL has provided support for community investment and capacity development, and NGTL is in ongoing discussions with Aboriginal communities and businesses regarding potential employment and business opportunities. The Board encourages the implementation of policies and measures that support local and Aboriginal employment, contracting and training, and encourages NGTL to continue to monitor the effectiveness of its policies and programs.

In view of the measures outlined in NGTL's application and its commitments, the Board is satisfied that the Project's impacts on socio-economic factors including infrastructure and services would be adequately addressed. The Board also finds that the proposed Project would provide positive economic benefits to local, regional, and provincial economies.

Appendix I

List of Issues

The Board has identified but does not limit itself to the following issues for discussion in the proceeding:

1. The need for the proposed facilities.

2. The economic feasibility of the proposed facilities.

3. The potential commercial impacts of the proposed project.

4. The potential environmental and socio-economic effects of the proposed facilities, including those to be considered under the *Canadian Environmental Assessment Act*.

5. The appropriateness of the general route and size of the pipeline.

6. The suitability of the design of the proposed facilities.

7. Potential impacts of the project on Aboriginal interests, including Aboriginal and treaty rights.

8. Consultation with the public and Aboriginal groups on the proposed project including cumulative effects.

9. The terms and conditions to be included in any approval the Board may issue.

Appendix II

21 June 2012 Letter Decision

File OF-Fac-Gas-N081-2010-15 02
21 June 2012

Mr. Joel Forrest
Senior Legal Counsel
Law & Regulatory Research
TransCanada PipeLines Limited
450 – 1st Street S.W.
Calgary, AB T2P 5H1
Facsimile 403-920-2354

Mr. Mark Manning
Senior Project Manager
Regulatory Services
TransCanada PipeLines Limited
450 – 1st Street S.W.
Calgary, AB T2P 5H1
Facsimile 403-920-2347

Mr. Shawn H.T. Denstedt, Q.C.
Osler, Hoskin & Harcourt LLP
Suite 2500
TransCanada Tower
450 - 1st Street S.W.
Calgary, AB T2P 5H1
Facsimile 403-260-7024

Dear Mr. Forrest, Mr. Manning and Mr. Denstedt:

NOVA Gas Transmission Ltd. (NGTL)
Hearing Order GH-004-2011
Leismer Kettle River Crossover (Project) Application of 15 July 2011
Letter Decision

The National Energy Board has considered the above-referenced Application dated 15 July 2011 and the evidence and submissions made in the GH-004-2011 proceeding. As a responsible authority under the *Canadian Environmental Assessment Act* (CEA Act), the Board conducted an environmental screening of the Project. The Board has determined, pursuant to paragraph 20(1)(a) of the CEA Act, that taking into account the implementation of NGTL's proposed environmental protection procedures and mitigation measures, and compliance with the attached conditions, the Project is not likely to cause significant adverse environmental effects. The Board issues the attached Environmental Screening Report pursuant to the CEA Act.

Having considered, addressed and discharged its obligation under the CEA Act, the Board wishes at this time to render its decision on NGTL's application (Decision) with reasons to follow. The Board issues the attached Decision on the application heard by the Board in the GH-004-2011 proceeding, with conditions, also attached.

Yours truly,

Sheri Young
Secretary of the Board

Attachments: Decision, Conditions, Environmental Screening Report

Decision

Having considered and weighed all the evidence before it, the Board finds that the Leismer to Kettle River Crossover, as proposed by NGTL, is and will be required by the present and future public convenience and necessity and is in the public interest.

The Board will recommend to Governor in Council that a Certificate of Public Convenience and Necessity (Certificate) be issued. Subject to Governor in Council approval, the Board will issue a Certificate for the Project, incorporating the terms and conditions (Certificate Conditions) attached to this Decision, pursuant to Part III of the *National Energy Board Act*.

The Board reminds NGTL that it has made a number of commitments to the Board and other parties during the GH-004-2011 proceeding and expects NGTL to adhere to these commitments.

This is the Board's decision on NGTL's Application. Written reasons for this decision will be issued in due course.

L. Mercier
Presiding Member

R.R. George
Member

G.A. Habib
Member

Calgary, Alberta
June 2012

Appendix III

Certificate Conditions

In these conditions, the expression "commencing construction" means the clearing of vegetation, ground-breaking and other forms of right-of-way preparation that may have an impact on the environment, but does not include activities associated with normal surveying activities. Where any condition requires a filing with the Board "for approval" for a specific action, NGTL must not commence that action until the approval is issued.

The terms below (in bold) have the following meanings:

Project - The Project consists of approximately 77 km of 762 mm (NPS 30) OD pipe and related facilities from a tie-in at the existing Leismer compressor station located at LSD 3-4-081-13 W4M extending east and tie into the existing 273.1 mm (NPS 10) OD Kettle River Lateral and the existing 406.4 mm (NPS 16) OD Kettle River Lateral Loop at LSD 14-26-80-6 W4M.

Footprint – The area directly disturbed by the construction and clean-up activities associated with the Project, including associated physical works and activities (e.g., permanent right-of-way, temporary workspace for construction, tie-in facilities).

Certificate – The Certificate of Public Convenience and Necessity authorizing the construction and operation of the facilities applied for under Section 52 of the *National Energy Board Act*.

General

1. Compliance

   NGTL shall comply with all of the conditions contained in this Certificate unless the Board otherwise directs.

2. Project Design, Construction and Operation

   NGTL shall cause the approved Project to be designed, constructed and operated in accordance with the specifications, standards and other information referred to in its application or as otherwise agreed to during questioning or in its related submissions.

3. Implementation of Environmental Protection

   NGTL shall implement or cause to be implemented all of the policies, practices, programs, mitigation measures, proposed conditions and procedures for the protection of the environment included in or referred to in its application or related submissions or as otherwise agreed to during questioning.

Prior to Construction

4. Construction Schedule

NGTL shall, at least 14 days prior to the commencement of construction, file with the Board a detailed construction schedule identifying major construction activities and shall notify the Board of any modifications to the schedule or schedules as they occur.

All clearing and grading within the Egg-Pony Caribou Area shall be completed by 15 February 2013. The schedule shall reflect NGTL's commitment of minimizing overlap with the Caribou restrictive activity period (RAP). The schedule shall also demonstrate the aim of completing all other construction activities within the Egg-Pony Caribou Area by 1 March 2013.

5. Manuals and Programs

NGTL shall file with the Board the following programs and manuals within the time specified or as otherwise directed by the Board:

a) Field Joining Program - 14 days prior to joining;

b) Construction Safety Manual - 14 days prior to construction;

c) Field Pressure Testing Program - 14 days prior to pressure test;

d) Field Emergency Response Plan - 14 days prior to construction;

e) Security Management Plan – 14 days prior to construction.

6. Commitments Tracking Table

NGTL shall:

a) file an updated Commitments Tracking Table with the Board 14 days prior to commencement of construction;

b) update the status of the commitments in paragraph (a) on a monthly basis until the commencement of operation and on an annual basis thereafter, until all commitments have been achieved;

c) maintain at its construction office(s):

i) the relevant environmental portion of the Commitments Tracking Table listing all regulatory commitments, including but not limited to, those commitments resulting from NGTL's application and subsequent filings, and conditions from permits, authorizations and approvals;

ii) copies of any permits, approvals or authorizations for the Project issued by federal, provincial or other permitting authorities, which include environmental conditions or site-specific mitigation or monitoring measures; and

iii) any subsequent variances to any permits, approvals or authorizations in ii).

7. Environmental Protection Plan (EPP) and Environmental Alignment Sheets

NGTL shall file with the Board for approval, at least 60 days prior to commencing construction:

a) An updated environmental protection plan, including environmental alignment sheets, for the construction and operation of the Project facilities.

The EPP shall be a comprehensive compilation of all environmental protection procedures, mitigation measures, and monitoring commitments, as set out in NGTL's application for the Project, subsequent filings, evidence collected during the hearing process, or as otherwise agreed to during questioning or in its related submissions. The EPP shall describe the criteria for the implementation of all procedures and measures. The EPP shall include, but not be limited to, the following:

i) environmental procedures including site-specific plans, criteria for implementation of these procedures, mitigation measures and monitoring applicable to all Project phases and activities; and

ii) a reclamation plan which includes a description of the condition to which NGTL intends to reclaim and maintain the right-of-way (RoW) once construction has been completed, and a description of measurable goals for reclamation.

b) All mitigation related to caribou and caribou habitat is placed in one chapter of the EPP which includes:

i) NGTL's commitments to adhering to specific provincial and federal best practices, requirements and timing restrictions;

ii) a list of all measures to minimize disturbance to caribou habitat, and measures to be taken before and during construction to help accelerate the restoration of caribou habitat; and

iii) the locations where those measures will be taken.

c) Evidence demonstrating that:

i) there is a management system in place which ensures the updates of the environmental protection procedures, mitigation measures and monitoring are effectively communicated to employees, contractors and regulators; and

ii) consultation took place with relevant government authorities, where applicable.

8. Species at Risk Surveys

NGTL shall submit for approval 60 days prior to the commencement of construction:

a) a summary of its findings based on field surveys for western (boreal) toad, yellow rail, Canada warbler, olive-sided flycatcher, and rusty blackbird, trapper data for wolverine and incidental observations for common nighthawk;

b) specific mitigation measures that will be implemented;

c) an outline of how NGTL will conduct post-construction monitoring for these species and performance measures that will be used; and

d) evidence of consultation with Environment Canada (EC) and the province that includes a summary of all concerns raised by EC and the province and a commitment to undertaking those agencies' recommendations. In those cases where NGTL does not commit to those recommendations, NGTL shall provide a detailed explanation.

9. Caribou Restricted Activity Period (RAP) Contingency Plan

NGTL shall file with the Board, by 15 December 2012, a contingency plan specifying additional measures NGTL will implement, to accelerate construction activities in the event that any potential delays risk increasing the overlap of construction activities with the Caribou RAP.

10. Caribou Habitat Restoration Plan (CHRP)

NGTL shall file with the Board for approval, as per the timelines below, preliminary and final versions of a CHRP.

a) a preliminary CHRP - to be submitted at least 60 days prior to commencing construction. This version of the CHRP shall include, but not be limited to:

i) the goals and measurable objectives of the CHRP;

ii) identification of any suitable immediate, medium-term and long-term caribou habitat restoration methodologies, as well as a literature review and discussion of the effectiveness of the different potential methods;

iii) the framework that will be used to identify potential caribou habitat restoration sites and the decision-making criteria that will be used for final site selection;

iv) the criteria that will be used to evaluate the effectiveness of the CHRP to determine whether goals have been met;

v) a tentative schedule indicating when measures will be initiated and completed; and

vi) evidence and a summary of consultation with EC and Alberta Sustainable Resource Development (ASRD) regarding the CHRP.

b) a final CHRP - to be submitted on or before 1 November after the first complete growing season following the commencement of operation of the Project. This updated version of the CHRP shall include, but not be limited to:

i) the preliminary CHRP, with any updates highlighted in a revision log;

ii) a complete list of the proposed sites for caribou habitat restoration, including a description of the site-specific restoration activities and maps or Environmental Alignment Sheets showing the locations of the sites;

iii) confirmation of the rationale used to select the caribou habitat restoration sites;

iv) a discussion of the locations or conditions that may present specific challenges;

v) a schedule indicating when measures will be initiated and completed;

vi) evidence and summary of consultation with EC and ASRD regarding the Final CHRP; and

vii) a quantitative and qualitative assessment of the area of caribou habitat that is directly and indirectly disturbed and the duration of spatial disturbance.

11. Heritage Resources

At least 30 days prior to the commencement of construction, NGTL shall file with the Board:

a) a copy of correspondence from Alberta Culture confirming that NGTL has obtained all archaeological and heritage resource permits and clearances; and

b) a statement on how NGTL intends to implement any recommendations contained in a) above.

12. Post-Construction Monitoring Program (PCMP)

NGTL shall file with the Board for approval, at least 60 days prior to commencing construction, a preliminary detailed PCMP which:

a) describes the methodology to be used for monitoring and the criteria established for evaluating success;

b) identifies the issues to be monitored, including all valued ecosystem components contained in the PCMP section of the draft EPP together with wetland habitat quality and function, wildlife, wildlife habitat, and species at risk; and

c) includes details of consultation undertaken with appropriate provincial and federal authorities.

During Construction

13. Construction Progress Reports

NGTL shall file with the Board by mid and end of each month, construction progress reports. The reports shall include information on the activities carried out during the reporting period, any environmental, safety and security issues and issues of non-compliance, and measures undertaken for their resolution.

Each progress report after 15 December 2012 shall also include an update on the extent to which potential delays risk increasing the overlap of construction activities with the Caribou RAP, and an explanation of whether the measures in the Caribou RAP Contingency Plan need to be implemented.

14. Horizontal Directional Drilling of Christina River

NGTL shall:

a) notify the Board in writing of any change from the proposed horizontal directional drilling watercourse crossing method, at least seven days prior to implementing a contingency crossing of Christina River, and provide the reasons for that change;

b) file with the Board, prior to commencing construction of a contingency crossing of Christina River, a copy of the authorizations from relevant government agencies for the in-stream crossing method; and

c) file with the Board, within 30 days of completing a contingency trenched crossing of Christina River, a site-specific reclamation plan for the crossing which includes the desired outcomes following implementation of the plan.

Post Construction and Operations

15. Condition Compliance by a Company Officer

Within 30 days of the date that the approved Project is placed in service, NGTL shall file with the Board a confirmation, by an officer of the company, that the approved applicable Project was completed and constructed in compliance with all applicable conditions in this Certificate. If compliance with any of these conditions cannot be confirmed, the officer of the company shall file with the Board details as to why compliance cannot be confirmed. The filing required by this condition shall include a statement confirming that the signatory to the filing is an officer of the company.

16. Post-Construction Environmental Monitoring Program

On or before 31 January after each of the first, third, and fifth complete growing seasons following the commencement of operation of the Project, NGTL shall file with the Board a post-construction environmental monitoring report that:

a) describes the methodology used for monitoring, the criteria established for evaluating success and the results found;

b) identifies the issues to be monitored, including but not limited to unexpected issues that arose during construction, and their locations (e.g., on a map or diagram, in a table);

c) describes the current status of the issues (resolved or unresolved), any deviations from plans and corrective actions undertaken;

d) assesses the effectiveness of mitigation (planned and corrective) measures applied against the criteria for success;

e) includes details of consultation undertaken with appropriate provincial and federal authorities;

f) provides proposed measures and the schedule that NGTL would implement to address ongoing issues or concerns; and

g) includes an assessment of wetland habitat and wildlife and wildlife habitat, including species at risk.

The first monitoring report shall include a final PCMP, incorporating any changes or refinements to the preliminary PCMP.

17. Weed Management Plan

NGTL shall file with the Board, at least 30 days prior to requesting Leave to Open, a project-specific Weed Management Plan that includes:

a) NGTL's goals and measurable objectives regarding weed management;

b) the methods and procedures available to achieve the mitigation goals and clear decision criteria for their selection;

c) either:

i) evidence confirming satisfaction of all relevant regulatory authorities, or, if (i) is not possible,

ii) evidence of its consultation with all relevant regulatory authorities and a summary of their outstanding concerns.

d) the criteria to determine if the mitigation goals have been met;

e) the frequency of monitoring activities along the RoWs and temporary workspaces;

f) training and qualification requirements of NGTL staff responsible for monitoring;

g) a mechanism for tracking weed problems and weed control activities; and

h) criteria to evaluate the effectiveness of the Weed Management Plan, as well as adaptive management practices.

18. Offset Measures Plan for Residual Impacts to Caribou Habitat

NGTL shall file with the Board for approval, as per timelines below, preliminary and final versions of a plan to offset all residual Project-related effects resulting from directly and indirectly disturbed caribou habitat, after taking into account the implementation of the EPP and CHRP measures. The Offset Measures Plan shall include:

a) a preliminary version, to be filed for approval at least 60 days prior to requesting Leave to Open, with the criteria and the measurable objectives of the plan, including, but not limited to, a discussion of:

i) an initial quantification of the area directly and indirectly disturbed;

ii) a list of the potential offset measures available;

iii) the appropriate offset ratio for each potential measure;

iv) the expected effectiveness of each measure;

v) the relative value of each measure towards achieving the offset; and

vi) the decision-making criteria for selecting which specific offset measures and accompanying offset ratios would be used under what circumstances.

b) a final version, to be filed for approval on or before 1 February after the first complete growing season following the commencement of operation of the Project, with:

i) the contents of the preliminary version, with any updates highlighted in a revision log;

ii) a complete list of the offset measures and appropriate offset ratios to be implemented or already underway, including a description of site-specific details and maps showing the locations;

iii) a schedule indicating when measures will be initiated and completed; and

iv) either an assessment of the effectiveness of the measures and their value in

offsetting the residual effects or a detailed plan for completing an assessment of the effectiveness and value of the offset.

Both the preliminary and final versions of the plan shall also include:

c) a description of NGTL's consultations with potentially affected Aboriginal groups regarding the plan, including any concerns that were raised and how these have been addressed; and

d) evidence and summary of consultation with EC and ASRD regarding the plan.

19. Caribou Habitat Restoration and Offset Measures Monitoring Program (Caribou Program)

NGTL shall file with the Board for approval, on or before 1 February after the first complete growing season following the commencement of operation of the Project, a program for monitoring and verifying the effectiveness of the caribou habitat restoration and offset measures implemented as part of the CHRP and Offset Measures Plan. The Caribou Program shall include, but not be limited to:

a) the scientific methodology or protocol for short-term and long-term monitoring of the restoration and offset measures, and the effectiveness of the measures;

b) frequency, timing and locations of monitoring and the rationale for each;

c) protocols for how restoration and offset measures will be adapted, as required, based on the monitoring results from the implementation of either the Project or other NGTL CHRPs and Offset Measures Plans; and

d) a schedule for filing reports of monitoring results and the adaptive management responses, to the Board, EC and ASRD, to be contained in the Program as well as at the beginning of each report filed.

20. Monitoring Reports

NGTL shall file with the Board, based on the schedule referred to in the Caribou Habitat Restoration and Offset Measures Monitoring Program, a report(s) outlining the results of the monitoring program.

21. Aboriginal Consultation Reports during Construction

NGTL shall file with the Board, on a monthly basis during construction, reports on consultation activities undertaken with those Aboriginal groups that NGTL will include in its ongoing consultation plans for the Project. The reports shall include, at a minimum:

a) a list of those Aboriginal groups included in consultation activities;

b) summaries of any issues or concerns raised;

c) a description of how any concerns or issues were addressed; and

d) a description of any Project-specific reports or updates that were provided by NGTL to Aboriginal groups included in consultation activities.

Certificate Expiration

22. Sunset Clause

Unless the Board otherwise directs prior to 21 June 2013, this Certificate shall expire on 21 June 2013 unless construction in respect of the Project has commenced by that date.

Appendix IV

NEB Ruling on Chard Métis Local No. 214 Motion

File OF-Fac-Gas-N081-2010-15 02
4 May 2012

Ms. Julia Gaunce
Rae and Company
900, 1000 Fifth Avenue SW
Calgary, AB T2P 4V1
Facsimile 403-264-8399

Dear Ms. Gaunce:

National Energy Board Hearing Order GH-004-2011
NOVA Gas Transmission Ltd.
Leismer to Kettle River Crossover (Project) Application
Chard Métis Local No. 214 (CML 214) Notice of Motion

On 18 April 2012, the National Energy Board received a letter from CML 214 indicating that it intended to raise as a preliminary matter a question of the extent to which the hearing will be understood by attending CML 214 members in absence of translation into Chipewyan Dené during the proceeding.

As directed by the Board, on 26 April 2012 CML 214 filed a Notice of Motion requesting the Board to provide simultaneous English-to-Chipewyan Dené translation during the oral portion of the hearing beginning on 8 May 2012. CML 214 states that the first language of the majority of the members of CML 214 is Chipewyan Dené.

On 30 April 2012, the Board received comments from NGTL stating that CML 214's motion should be dismissed.

The Board has considered the submissions from the parties. The Board values CML 214's participation in these proceedings. However, the Board is not persuaded in these circumstances that there is a requirement for translation for community members in attendance. The Board has already offered to provide support for translation of the oral evidence of CML 214's witness. CML 214 has since indicated that it has arranged that Ron Janvier of the Chipewyan Prairie Dené First Nation will provide translation of the oral evidence of Raoul Montgrand. Moreover, implementing such a request is unlikely to be feasible without incurring delays in the hearing and prejudicing the rights of other parties.

Accordingly, the Board denies the Motion.

Yours truly,

Sheri Young
Secretary of the Board

Appendix V

Environmental Screening Report

National Energy Board | Office national de l'énergie

ENVIRONMENTAL SCREENING REPORT

Pursuant to the *Canadian Environmental Assessment Act* (CEA Act)

Leismer to Kettle River Crossover Project

Applicant Name:	Nova Gas Transmission Ltd.		
Application Date:	15 July 2011	**CEA Act Registration Date:**	13 December 2010
National Energy Board (NEB or Board) File Number:	OF-Fac-Gas-N081-2010-15 02	**Canadian Environmental Assessment Registry Number:**	10-01-59629
CEA Act Law List Trigger:	Section 52 of the *National Energy Board Act* (NEB Act)	**CEA Act Determination Date:**	19 June 2012

Canada

SUMMARY

NOVA Gas Transmission Ltd. (NGTL) applied to the National Energy Board (Board or NEB), pursuant to section 52 of the *National Energy Board Act*, to construct and operate a 77 kilometre (km) long buried sweet natural gas pipeline, which is referred to as the Leismer to Kettle River Crossover Project (the Project). The Project is located 90 km south of Fort McMurray, Alberta.

Both the NEB and Transport Canada are Responsible Authorities (RAs) pursuant to the *Canadian Environmental Assessment Act*, while Environment Canada, Fisheries and Oceans Canada, Natural Resources Canada and Health Canada have identified themselves as Federal Authorities (FAs) in possession of specialist expert information or knowledge.

This Environmental Screening Report (ESR) is based on information provided by NGTL, RAs, FAs, and Aboriginal groups, as part of the public hearing process for the Project. Comments received on the draft version have been considered by the Board in its preparation of the final ESR.

Numerous potential adverse effects of the Project, both bio-physical and socio-economic, have been identified. Key issues of concern relate to species at risk identified in the *Species at Risk Act* and by the Committee on the Status of Endangered Wildlife in Canada (including caribou), cumulative effects and Aboriginal traditional land and resource use.

The Board is of the view that, with the implementation of NGTL's proposed environmental protection procedures and mitigation measures, compliance with the Board's regulatory requirements, and the Board's recommendations as set out in this report, the Project is not likely to cause significant adverse environmental effects.

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LIST OF ABBREVIATIONS

ACCS	Alberta Culture and Community Services
ASRD	Alberta Sustainable Resource Development
BLCN	Beaver Lake Cree Nation
Board or NEB	National Energy Board
CEA	cumulative effects assessment
CEA Act	*Canadian Environmental Assessment Act*
CEARIS	Canadian Environmental Assessment Registry Internet site
ChardML	Chard Métis Local #214
CRDNC	Christina River Dene Nation Council
CHRP	Caribou Habitat Restoration Plan
CNR	Canadian National Railway
ConklinML	Conklin Métis Local #193
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
CPDFN	Chipewyan Prairie Dene First Nation
CP	cathodic protection
CPP	Caribou Protection Plan
DFO	Fisheries and Oceans Canada
EA	environmental assessment
EC	Environment Canada
EPP	Environmental Protection Plan
ESA	Environmental and Socio-Economic Assessment prepared by NGTL
ESAR	East Side of Athabasca River
ESR	Environmental Screening Report prepared pursuant to the CEA Act
FA	Federal Authority
FMFN	Fort McMurray #468 First Nation
FMML	Fort McMurray Métis Local #1935
GHG	greenhouse gas
ha	Hectare
HADD	harmful alteration, disruption or destruction
HDD	horizontal directional drilling
HLFN	Heart Lake First Nation

HRIA	Historical Resources Impact Assessment
IR	Indian Reserve
km	kilometre
LARP	Lower Athabasca Regional Plan (Draft)
LSA	local study area
LSD	legal subdivision
m	metre
mm	millimetre
MSD	minimal surface disturbance
NEB Act	*National Energy Board Act*
NGTL	NOVA Gas Transmission Ltd.
OD	outside diameter
PCMP	post-construction monitoring program
Pipeline	77 km pipeline for the proposed Leismer to Kettle River Crossover Project
Project	NOVA Gas Transmission Ltd. proposed Leismer to Kettle River Crossover Project
RA	Responsible Authority
RAP	restricted activity period
RoW	right-of-way
RMWB	Regional Municipality of Wood Buffalo
RSA	regional study area
SARA	*Species at Risk Act*
TC	Transport Canada
TCPL	TransCanada PipeLines Limited
TLU	traditional land use
TWS	temporary workspace
VEC	valued environmental components
WLML	Willow Lake Métis Local #780
WMU	Wildlife Management Unit

1.0 INTRODUCTION

1.1 Project Overview

NOVA Gas Transmission Ltd. (NGTL), a wholly owned subsidiary of TransCanada PipeLines Limited (TCPL), has applied to construct and operate a new 77 kilometre (km) long, buried sweet natural gas pipeline, which is referred to as the Leismer to Kettle River Crossover Project (Project). The Project is located 90 km south of Fort McMurray, Alberta.

The 77 km 762 mm (30-inch) outside diameter (OD) pipeline (Pipeline) would extend from the existing Leismer Compressor Station to an existing 273.1 mm (10-inch) OD Kettle River Lateral and 406.4 mm (16-inch) OD Kettle River Lateral Loop at legal subdivision (LSD) 14-26-80-6 W4M.

The Pipeline right-of-way (RoW) would parallel existing linear disturbances for approximately 55 km, of which, approximately 29 km is considered contiguous and approximately 26 km is considered non-contiguous. The remaining 22 km of RoW for the Project does not parallel existing linear disturbances.

Approximately 264 hectares (ha) would be required to construct the Pipeline. Section 4.0 of this report provides a detailed description of the works and activities associated with the Project.

NGTL is proposing to begin construction in the fourth quarter of 2012 and the proposed in-service date is in the second quarter of 2013. The estimated cost of the Project is $157 million.

1.1.1 Rationale for the Project

The Project is part of a multi-year planned expansion of NGTL's existing Kirby Regional natural gas system in order to provide additional capacity to supply sweet natural gas in northeastern Alberta. Collectively, this Project and other future projects involve transporting gas from other parts of NGTL's Alberta System[2] to supplement the declining local supply and increasing demand in the Kirby area.

[2] NGTL's Alberta System consists of approximately 24,000 km of natural gas pipeline within Alberta and British Columbia.

1.2 Baseline Information and Sources

The analysis for this Environmental Screening Report (ESR) is based on information from various sources including:

- NGTL's Project application package, including its Environmental and Socio-Economic Assessment (ESA);
- NGTL's supplemental filings to the Project application;
- responses to information requests;
- submissions from Aboriginal groups, including letters of comment; and
- evidence submitted before and during the oral public hearing.

Filed information pertaining to the Project application can be found within 'Regulatory Documents' on the NEB's website (www.neb-one.gc.ca). For more details on how to obtain documents, please contact the Secretary of the NEB via the contact information specified in Section 10.0 of this report.

2.0 ENVIRONMENTAL ASSESSMENT (EA) PROCESS

On 3 December 2010, NGTL filed a Project Description with the National Energy Board (Board or NEB) regarding the proposed Project. This action initiated the *Canadian Environmental Assessment Act* (CEA Act) EA process. On 15 July 2011, NGTL filed its application for the Project pursuant to section 52 of the *National Energy Board Act* (NEB Act), which triggers the CEA Act *Law List Regulations*, thereby requiring the preparation of this ESR.

2.1 Government Participation in the EA Coordination Process

The NEB is the Federal Environmental Assessment Coordinator for this Project. On 16 December 2010, pursuant to section 5 of the CEA Act *Regulations Respecting the Coordination by Federal Authorities of Environmental Assessment Procedures and Requirements*, the NEB issued a Federal Coordination Notification letter, to identify the potential involvement of federal departments in the EA process. The responses are summarized below:

Table 1: Role of Federal Authorities in the CEA Act Process

Responsible Authorities (RAs)	**Regulatory Trigger(s)**
NEB	NEB Act section 52
Transport Canada (TC)	NEB Act subsection 108(4), and possibly *Navigable Waters Protection Act* subsections 5(2) and 5(3)
Federal Authorities (FAs) in Possession of Specialist or Expert Information or Knowledge	
Fisheries and Oceans Canada (DFO) Environment Canada (EC) Natural Resources Canada Health Canada	

The Canadian Transportation Agency and Aboriginal Affairs and Northern Development Canada were contacted and both departments stated that they would have no involvement in the Project EA.

The Federal Coordination Notification letter was also sent to the Province of Alberta, through Alberta Environment, which responded by stating that it did not wish to participate in the federal review process.

2.2 Opportunities for Public Input into the EA

On 1 November 2011, the NEB released Hearing Order GH-004-2011 describing the process and requirements of the public hearing for the Project. The NEB process allowed for a number of opportunities for the public and Aboriginal groups to participate and provide input into the EA. This included providing comments on the draft Scope of the EA and List of Issues, filing a letter of comment, or participating as an Intervenor. The Government Participant option was provided to government authorities.

Throughout the EA process, the Board received submissions pertaining to Project-related EA matters. Section 6.0 describes the issues raised in submissions to the Board.

2.2.1 Draft Scope of the EA

The NEB posted a preliminary draft Scope of the EA on the Canadian Environmental Assessment Registry Internet site (CEARIS) on 25 January 2011. That version was later modified based on NGTL's changes to the Project and updated information regarding federal agency roles in the EA. The revised version, titled as the draft Scope of the EA, was attached to the GH-004-2011 Hearing Order. All interested parties were encouraged to review the document and provide any suggested amendments or additions by 8 December 2011. As noted in Section 6.3.1, no comments were received on the draft Scope of the EA.

2.2.2 Public Hearing

As detailed in Hearing Order GH-004-2011, the NEB held a public hearing process to consider the application for the Project. The oral portion of the hearing was held in Fort McMurray, Alberta on 8 May 2012.

2.2.3 Draft ESR

On 1 June 2012, the NEB released a draft copy of the ESR to all interested parties for comment and posted a notice for public participation on the CEARIS. All parties were encouraged to review the draft ESR and provide any suggested amendments or additions by 13 June 2012. NGTL was given until 15 June 2012 to provide comments. TC, EC, Conklin Métis Local #193 (ConklinML) and NGTL filed comments with the Board.

See Section 6.3.2 for a summary of the comments received.

3.0 SCOPE OF THE EA

The Scope of the EA is composed of three components:

- Scope of the Project;
- Factors to be Considered; and
- Scope of the Factors to be Considered.

The Scope of the EA is attached as Appendix 1 to this ESR and provides detailed information on each of these three components. The Board notes that since the draft was released, it has made minor wording changes to improve clarity and readability. In addition, two changes were made in response to NGTL's revisions to the Project. Based on NGTL's 15 December 2011 submission, the draft scope of the EA was modified to reflect NGTL's Pipeline route length reduction from 79 to 77 km and the phrase "new power facilities to supply or augment existing power to cathodic protection facilities" was deleted from the draft scope in response to NGTL's statement at the Hearing that the Project would not include a thermal electrical generator.

Section 4.0 of this ESR expands upon the Scope of the Project component.

4.0 DESCRIPTION OF THE PROJECT

Table 2 provides information on each Project component throughout the three phases of the Project: construction, operations and abandonment.

Table 2: Description of the Project

Physical Work and/or Activity
Construction Phase – Timeframe: Beginning Quarter 4, 2012
▪ Construction of a 77 km sweet natural gas buried Pipeline. o The western end of the proposed 762 mm (30-inch) OD Pipeline would tie in to the existing Leismer Compressor Station located at LSD 3-4-81-13W4M and then extend easterly for 44 km to a tie-in point at the existing Meadow Creek Lateral (LSD 2-22-80-9W4M). The Pipeline would then continue from that point easterly for another 33 km and tie into the existing 273.1 mm (10-inch) OD Kettle River Lateral and existing 406.4 mm (16-inch) OD Kettle River Lateral Loop at LSD 14-26-80-6W4M. o Approximately 264 ha (226 ha of new permanent RoW and 38 ha of temporary workspace [TWS]) would be required to construct the Pipeline. o The cleared RoW would be 32 m wide, with reduced new clearing where the RoW is adjacent to existing disturbed RoW. ▪ Associated infrastructure to be installed: o block valves and side valves (spacing is typically between 30 km and 35 km apart); a crossover valve is proposed at the tie-in with the Meadow Creek Lateral; o valve and blind flange to accommodate the potential future installation of a launcher/ receiver for in-line inspection; o cathodic protection (CP) for the facilities; and o communications and controls equipment. ▪ Construction activities include: clearing (including merchantable timber), stripping salvage, grading (where required), excavation, backfilling, clean-up and reclamation.

Physical Work and/or Activity
▪ Access: No new access is proposed to support construction and operation of the Project. ▪ Temporary vehicle/equipment crossings would be required at watercourses. ▪ Hydrostatic test water would be withdrawn from natural sources. ▪ The Pipeline would cross 17 watercourses. The horizontal directional drilling (HDD) method would be used at the Christina River crossing. An isolated (dam and pump or flume) or frozen/dry open cut method would be used for the remaining crossings. ▪ TWS is planned at specific locations, including watercourse crossings, roads and railways, at alignment bends, areas of steep terrain, log decks, storage areas and equipment and fuel storage areas. The amount of TWS will be limited to the extent practical, and existing clearings would be used to the extent possible. ▪ NGTL stated that it will use an existing campsite and that no temporary or permanent access requirements are anticipated for that site.
Operation Phase – Timeframe: Service life of the Project is 30+ years. The estimated in-service date is April 2013.
▪ Ongoing transmission of sweet natural gas within the Pipeline. ▪ Aerial patrols. ▪ In-service inspections. ▪ Vegetation management. ▪ Maintenance and Repairs.
Abandonment Phase – Timeframe: At the end of the service life of the Project
▪ Pursuant to section 74(1)(d) of the NEB Act, an application would be required to abandon the Project, at which time the NEB would assess the environmental effects.

5.0 DESCRIPTION OF THE ENVIRONMENT

The Project crosses provincial Crown land for all but approximately 40 metres (m) of its length, where it crosses a Canadian National Railway (CNR) RoW. NGTL stated that NGTL and the CNR have a Master Utility Agreement and a RoW agreement will be negotiated.

The following description is based largely on NGTL's desktop/literature review, field surveys conducted in 2011, as well as NGTL's review of applications prepared for other projects and its communication with Aboriginal groups, local land users, representatives from local and regional governments, and provincial and federal regulators. Information provided by NGTL focuses primarily on the proposed Project footprint; however, some information may apply to the local study area (LSA) or regional study area (RSA). Below are definitions for the various study areas.

- The Project footprint, approximately 264 ha in size, represents the physical area required for all Project components, including the permanent Pipeline RoW required during operations and TWS requirements during construction.

- The LSA for:
    - terrestrial environmental components (vegetation and wetlands, soil and terrain, wildlife, historic resources, traditional land use) extends one km on each side of the Pipeline's centre line. It is approximately 160 km^2 (16,025 ha) in size.
    - aquatic elements (fish and fish habitat, surface hydrology, surface water), extends 200 m upstream and 2 km downstream of each crossing.
    - the groundwater assessment included wells within one km of the Project.
    - air quality extends 5 km on either side of the Pipeline's centre line.
- The RSA for terrestrial environmental components is approximately 2,877 km2 (287,749 ha). It fully encompasses the LSA and was established to assess the contributions of the Project within the broader regional context. The RSA for aquatic environmental components is approximately 16,100 km2 (1,610,000 ha). It fully encompasses the LSA, and the entire drainage basins of the House River and the Christina River, within which all watercourse crossings are located.

Human Occupancy and Geographic Setting

- The Project is located within the Regional Municipality of Wood Buffalo (RMWB) and Lac la Biche County. The nearest communities/Indian Reserves (IRs) to the Project are Janvier (community and IR 194) - 9 km to the east of the Project, Conklin - 35 km to the south of the Project; and Anzac and Gregoire Lake IR 176 to the north of the Project.
- No IRs are crossed by the Project, although the Project is within traditional and asserted territories of various Aboriginal groups.
- No active residences occur adjacent to the Project. Two cabins are within the RSA, one of which is unoccupied and the other is used seasonally. Neither is within one km of the Project.

Land and Resource Use

- The Government of Alberta has established a Land Use Framework in which the Province is divided into seven geographic regions for planning purposes. The Project is within the Lower Athabasca Region. The Draft Lower Athabasca Regional Plan (LARP) was released on 29 August 2011.
- The Project is subject to RMWB Land Use Bylaw 99/059 and Lac la Biche County Land Use Bylaw 09/037 and conforms to land use designations in the area.
- The portion of the Project within RMWB is zoned as "rural district" and the surrounding zones include highway commercial, urban expansion district, and hamlet residential. This portion of the project would fall within the RMWB's Highway 63/881 Corridor Area Structure Plan that seeks to further develop industrial, commercial, residential, recreational and tourism activities.
- Land use in the Project area includes oil and gas activity and forestry.
- The Project overlaps Wildlife Management Units (WMUs) 512, 517, 519 and 529, which include general and archery big game hunting seasons for white-tailed deer, mule deer, moose and black bear. Hunting seasons range from April to the end of November.
- Twenty outfitters hold allocations in these WMUs for various hunted game.
- The Project crosses eight Registered Fur Management Areas.

Terrain/Soils

- Terrain within the LSA is comprised of undulating and rolling moraine and veneers of glaciofluvial material over moraine; however, on the eastern half of the Pipeline, there is undulating and hummocky moraine and undulating glaciofluvial deposits and at the eastern end of the Pipeline the landforms are an undulating and hummocky moraine and/or fluvial or lacustrine veneers over moraine.
- The general landscape is dominated by organic and morainal (till) deposits with smaller areas of organic, alluvial and glaciofluvial material.
- Soils within the LSA include brunisols, gray luvisols, gleysols and organics.
- The Project does not encounter any areas of permafrost or ground instability (i.e., low earthquake hazard).
- No major flooding was reported for the period from 1902 to 2005.
- The Project crosses areas of low fire danger rating along its eastern portion and moderate fire danger rating along its western portion.
- The Project does not encounter any sites listed on the Federal Contaminated Sites Inventory.
- As the Pipeline would parallel existing RoWs and pass close to several oil and gas surface facilities, there is a possibility of encountering undocumented contamination from previous industrial construction and operations. However, NGTL stated that it does not anticipate the occurrence of contaminated soils along the RoW.

Vegetation (including species of special conservation status)

- The Project is located within the Lower Boreal Highlands Subregion (81% of the proposed route) and Central Mixedwood Subregion (19% of the proposed route) of the Boreal Forest Natural Region.

  Within the Lower Boreal Highlands Subregion, which is cooler and moister than the Central Mixedwood Subregion, large portions of the central area in the Subregion were burned 15 to 30 years ago, and now primarily consist of pure or mixed stands of regenerating pine and aspen on upland sites. Peatland dominates within the Stony Mountain Plateau. Within the Central Mixedwood Subregion, pure stands of aspen and aspen–white spruce mixedwoods are more common.
- Ecological Land Classification for the LSA: 48% terrestrial, 48% wetlands and open water, and 4% anthropogenic disturbance areas.
- There are five Environmentally Significant Areas within the RSA; however, only one of them, Area 548, intersects the proposed route (for a distance of approximately 10 km).
- There are no vegetation species of concern identified in the *Species at Risk Act* (SARA) or by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) in the Project LSA and RSA.
- Two provincially-listed sensitive species (northern quillwort and small butterwort) have been documented within the RSA but were not observed during the 2011 rare plant survey along the RoW. Rare plant surveys are also scheduled to take place in mid-summer 2012.

- Fourteen provincially-listed ecological communities are within the Central Mixedwood and Lower Boreal Highlands subregions. None have been noted along the Pipeline route; however, one was found in the LSA, approximately 65 m east of the proposed Project footprint.
- No prohibited noxious or noxious weeds, as identified by the *Alberta Weed Act*, were observed along the Project footprint. Common dandelion, wild oat and alsike clover, all of which are non-native invasive plant (weed) species, were observed along the proposed RoW. Weed surveys are scheduled to take place in mid-summer 2012.

Water and Wetlands

- The Pipeline crosses 17 watercourses: Christina River, House River, Pony Creek and 14 unnamed watercourses. Only one watercourse, the Christina River is deemed navigable by TC.
- Forty-six groundwater wells (29 industrial, 15 domestic, one observation, one other) are located within one km of the Project.
- Nine wetland communities were identified in the LSA, including five peatland communities, two mineral wetlands and two non-vegetated open water types.
- Traditional plant species (e.g., Labrador tea, cloudberry and Sphagnum mosses), some of which have important medical uses or are harvested occasionally for food, were noted in bogs during a field survey.
- There are no Ramsar Wetlands of International Importance in the Project area.

Fish and Fish Habitat (including species of special conservation status)

- Species captured during field surveys conducted in 2010 and 2011 include Arctic grayling, brook stickleback, fathead minnow, lake chub, northern redbelly dace, pearl dace, and white sucker.
- Christina River provides high quality habitat for all fish species potentially present in the system. Ten watercourses were rated as poor quality habitat for sportfish such as Arctic grayling. Six watercourses do not provide fish habitat because of their small size and the lack of well-defined channels.
- Christina River and unnamed watercourse 12-WC-02 have sufficient depth to provide overwintering habitat for fish.
- Eight of the 17 watercourse crossings have a restricted activity period (RAP) from 16 April to 15 July. The remaining crossings do not have a RAP.
- No fish species listed on Schedule 1 of the SARA are known to occur in the Project area.
- Arctic grayling is listed as a Species of Special Concern by Alberta's Endangered Species Conservation Committee. The General Status of Alberta Wild Species 2010 lists Arctic grayling and northern redbelly dace as "Sensitive," and spoonhead sculpin as "May be at Risk." The status of pearl dace and finescale dace is currently listed as "Undetermined."

Wildlife and Wildlife Habitat

- Species that are expected to occur in the Boreal Highlands and Central Mixedwood subregions include ungulates, carnivores, rodents, birds including migratory birds, and amphibians, some of which are listed species. There is a migratory bird RAP from 1 May to 15 August (nesting period). The beaver is an important inhabitant as most of the productive ponds and swamp habitats in the Project area are a result of its activities.

- 2010 field survey observations (visual, tracks, scat) in the LSA included black bear, moose, grey wolf, coyote and woodland caribou boreal population (caribou). Field survey observations in 2011 did not identify any species within 200 m on each side of the proposed Pipeline route, although caribou, grey wolf, Canada lynx and porcupine tracks were observed further out.

Wildlife Species of Special Conservation Status

- Based on species ranges and available habitat, 13 federally-listed species (COSEWIC, SARA Schedules 1 and 3) have the potential to occur in the LSA: wolverine, caribou, western (boreal) toad, yellow rail, common nighthawk, Canada warbler, olive-sided flycatcher, rusty blackbird, northern leopard frog, peregrine falcon, whooping crane, wood bison and short- eared owl.
- Based on extensive experience in the area, NGTL anticipates that, of those species listed above, only the first eight are confirmed, or could potentially occur, in the Project area. Further assessment (field surveys and analysis of trapper reports) will be carried out in the summer of 2012, prior to the commencement of construction, to determine the presence of these species and/or their habitat.
- Approximately 50 provincially-listed species have the potential to occur in the LSA.
- Approximately 82% (63 km) of the Project passes through the Egg-Pony Caribou Area, which is within the East Side of Athabasca River (ESAR) caribou range. In Alberta, caribou ranges have a RAP from 15 February to 15 July (critical calving period). During this period, it is prohibited to initiate new site preparation or construction.

Heritage Resources

- A Historical Resources Impact Assessment (HRIA) was completed and filed with Alberta Culture and Community Services (ACCS). No new historic resource sites were recorded and NGTL recommended that *Historical Resources Act* clearance be granted by ACCS.

Traditional Land and Resource Use by Aboriginal People

- With the exception of a small parcel owned by the CNR, the Project is located entirely on Crown land in the area encompassed by Treaty 8. It traverses traditional and asserted territory claimed by a number of Aboriginal groups.
- NGTL's ESA was based on interviews conducted with Elders of Chard Métis Local #214 (ChardML) and Fort McMurray #468 First Nation (FMFN) together with FMFN's 2006 TLU report. It was also based on regional information obtained from other industry studies and NGTL's experience with other projects.
- Members of ChardML, FMFN and Willow Lake Métis Local #780 (WLML) participated in biophysical field studies or route over-flights.
- Four Aboriginal groups expressed concerns with the potential Project and cumulative effects of the Project on the environment and traditional land and resource use.
- NGTL is continuing to engage and update Aboriginal groups including finalizing TLU work and discussing appropriate mitigation. NGTL stated that the information collected during the TLU studies will be used during continued Project planning and development and will be incorporated into the EPP and environmental alignment sheets for the Project.

6.0 COMMENTS FROM THE PUBLIC

This section describes the issues raised during the process outlined in Section 2.0 of the ESR.

6.1 Project-Related Issues Raised in Comments Received by the NEB

Several Project-related issues were brought to the Board's attention by government agencies and Aboriginal groups through their filings. These submissions outlined a number of potential environmental and socio-economic effects that are relevant to this CEA Act EA. Table 3 lists the topics of interest in these filings. To view the submitted documents, please refer to the Project folder in the 'Regulatory Documents' area of the NEB website (www.neb-one.gc.ca) or click on the Filing Identification (ID) numbers provided in the table. If computer access is not available, you may obtain copies through the Secretary of the Board via the contact information provided in Section 10.0.

Table 3: Submissions to the NEB

Submitter	Topics of interest	Submission Date(s)	Filing ID(s)
EC	▪ Caribou and caribou habitat ▪ Species at risk field surveys ▪ Avoiding RAPs ▪ Migratory birds	20 December 2011 15 February 2012 10 April 2012	A2K6E4 A2Q2S4 A2S1H2
TC	▪ Contingency plans for navigable waters where the HDD method is to be used.	22 December 2011 7 May 2012	A2K4Q3 A2S9H7
Chipewyan Prairie Dene First Nation (CPDFN)	▪ Traditional land use ▪ Protection of cultural/sacred and ecological landscape of importance ▪ Impacts on water, wildlife and fish ▪ Cumulative effects ▪ Accidents and malfunctions	8 June 2011	A2A0Q2
ConklinML	▪ Traditional land and resource use ▪ Cumulative effects ▪ Impacts on caribou and caribou habitat ▪ Impact of accidents and malfunctions on muskeg and below ground waters ▪ Socio-economic and cultural impacts ▪ Protection of water quality and quantity ▪ Pathways and routing of the pipeline	4 July 2011 29 November 2011 9 April 2012	A2A2G5 A2J0X8 A2S0R1
ChardML	▪ Engagement and consultation ▪ Cumulative effects ▪ Water quality and quantity in Christina River ▪ Project impacts on traditional land and resource use	26 March 2012	A2R6J4
CRDNC	▪ Cumulative effects	23 April 2012	A2S5R6

6.2 Submissions during the Oral Portion of the Hearing

Chard ML expressed concerns about cumulative effects, physical barriers to wildlife movement, oil sands use of water, increased travel to harvest plants and animals, and the loss of land for traditional use. ConklinML declined to present direct oral evidence and confirmed that its TLU study had been completed. CRDNC expressed concerns about potential Project and cumulative impacts on caribou and other wildlife species and upon the supply of water.

6.3 Comments Received by the NEB on its EA Documentation

6.3.1 Comments on the Draft Scope of the EA

The Board did not receive any suggested amendments or additions to the draft Scope of the EA.

6.3.2 Comments on the Draft ESR

Comments were received from: TC, EC, ConklinML and NGTL.

Within its submission TC stated:

> "TC's requirement for regulatory approvals prior to construction should be mentioned in Section 8.6, [Recommendation] D. It should be noted that TC requires that NGTL obtain leave from the Minister of Transport under the NEB Act for both HDD [horizontal directional drilling] and the Contingency Plan prior to the commencement of the construction on the work."

TC requested that additional wording be added to the recommendation to address this issue.

The Board notes that within its application NGTL has committed to obtain approvals from a number of agencies including TC. NGTL has stated that it intends to fully meet its obligations pursuant to the NEB Act and *Navigable Waters Protection Act*. The Board has decided that Recommendation D as presented in Section 8.6 is sufficient.

EC stated that it does not have any concerns and looks forward to reviewing reports as required in the Recommendations presented in Section 8.6.

ConklinML re-iterated its previously expressed interest in participating in Project monitoring and stated that it has taken steps to enhance its monitoring capacity. ConklinML asked that the Board state its support for ConklinML's involvement in environmental impact mitigation and monitoring in the ESR. The Board has expressed its expectation that NGTL will fulfill its commitment to discuss the issues and concerns of Aboriginal groups with them and to consider additional mitigation where warranted. Accordingly, the Board has decided that no change to the ESR is required.

NGTL responded to ConklinML's comments, noting that it had committed to discuss the issues and concerns of Aboriginal groups with them and to consider additional mitigation where warranted, including potential Aboriginal monitors.

NGTL also provided comments to clarify the field survey methodology to be used for common nighthawk. Further, NGTL identified a few minor clarifications and subsequently the Board made revisions to: the map on the cover page, Section 1.1, Section 5.0, Section 8.3.2.1 and Recommendation G based on the comments received.

In addition, NGTL provided a response to TC's comment. However, as no changes were made to Recommendation D (as explained above), no updates to the ESR were required.

7.0 THE NEB'S EA METHODOLOGY

In assessing the environmental effects of the Project, the NEB first analyzed NGTL's route selection (Subsection 8.1) and then used an issue-based approach to evaluate the Project.

In Subsection 8.2, the NEB identified interactions expected to occur between the proposed project activities and the surrounding environmental elements, and potential adverse environmental effects that may result. Also included were the consideration of potential accidents and malfunctions that may occur due to the Project and any change to the Project that may be caused by the environment. In circumstances where the potential effect was unknown, it was categorized as a potential adverse environmental effect.

The last column of the table in Subsection 8.2 denotes the categories of the analysis of potential adverse environmental effects, which is included as Subsection 8.3. There are two categories: "Analysis of Potential Adverse Environmental Effects to be Mitigated through Standard Measures" (Subsection 8.3.1) and "Analysis of Potential Adverse Environmental Effects to be Mitigated through Non-Standard Design and Mitigation Measures" (Subsection 8.3.2).

Subsection 8.4 addresses cumulative effects, Subsection 8.5 addresses follow-up programs under the CEA Act and Subsection 8.6 lists all proposed recommendations for any regulatory approval for the Project, should it be approved.

8.0 ENVIRONMENTAL EFFECTS ANALYSIS

8.1 Pathways and Routing of the Pipeline

8.1.1 Pathway Alternatives: North and South

NGTL's long-term demand forecast indicates that existing facilities transporting gas into northeastern Alberta are insufficient and additional facilities will be required. In order to meet design flow requirements to 2026, NGTL evaluated two flow path alternatives to move the gas from the North Central Corridor pipeline to the Kirby area: a North Path and a South Path.

The North Path alternative is the more direct path. It would consist of the applied-for Project, plus a long term potential of approximately 100 km of additional pipeline following existing pipeline routes and four compressor upgrades.

The South Path alternative would be longer, and would consist of six additional compressor facilities plus a long term potential of approximately 250 km of additional pipeline, some of which follows existing pipeline routes.

NGTL indicated that the South Path alternative requires approximately 30% more pipeline construction than the North Path alternative, and concluded that significantly more environmental disturbance would be required. NGTL concluded that the South Path would cost approximately a further $110 million over the North Path, over the anticipated life of the Project and thereby selected the North Path alternative.

Upon selecting the North Path, NGTL evaluated two alternative OD pipe sizes: 24-inch and 30-inch. While the 24-inch OD alternative has a first-year cost that is $25.1 million less than the 30-inch alternative, NGTL selected the latter as it states that it would be capable of meeting the long term Kirby area design flow requirements without the need for future looping of the Project. The Project, as assessed and applied for, is based on the North Path.

8.1.2 Routing of the Pipeline

Within the North Path, NGTL identified two alternative routes for the Pipeline: a North Route and a South Route. The North Route is approximately 10 km north of the South Route. Both routes were similar in length; however, the length adjacent to existing linear disturbances was less on the South Route. The South Route had about 50% fewer watercourse crossings than the North Route.

NGTL used numerous evaluation criteria in selecting the route. These included: tie-in locations, terrain, land use, potential environmental effects, RoW corridors, crossings, historic resources, intermediate valve sites, access, construction time frame, future system expansion, economic feasibility and stakeholder participation.

NGTL's discussions with Aboriginal communities and regulatory agencies were a major influence in determining the preferred route. ASRD provincial wildlife biologists indicated significant concerns with the North Route with respect to caribou. Although NGTL stated that FMFN had initially expressed concerns with the South Route, it, along with NGTL and ASRD, reached consensus that the South Route was the preferred route with regard to potential effects to caribou. Therefore, NGTL selected the South Route for the Project.

8.2 Project - Environment Interactions

	Environmental Element	Description of Interaction (How, When, Where, or Why)	Potential Adverse Environmental Effect	Discussed in Subsection
Bio-Physical	Physical Environment – Terrain	▪ Vegetation clearing ▪ Stripping, salvage and grading ▪ Trench excavation and backfilling ▪ Soil exposure to the elements	▪ Alteration of terrain profile ▪ Loss of soil due to erosion ▪ Trench instability leading to subsidence	8.3.1
	Soil and Soil Productivity	▪ Vegetation clearing ▪ Stripping, salvage, and grading ▪ Trench excavation and backfilling ▪ Soil handling activities ▪ Vehicle and equipment traffic ▪ Encountering historical contamination during excavations	▪ Reduction of soil productivity and quality which may decrease vegetation diversity and productivity through: o strippings and subsoil admixing compaction and rutting o loss of soil due to erosion o spread of historical contamination to unaffected soils	8.3.1
	Vegetation	▪ Vegetation clearing (timber harvesting, slashing, brushing of understory vegetation) ▪ Ground disturbance ▪ Grading of areas involving stripping of the organic layer ▪ Soil handling activities ▪ Re-vegetation efforts ▪ Vehicle and equipment traffic	▪ Loss or alteration of native vegetation, including vegetation resources important to wildlife or humans ▪ Introduction and spread of invasive species (i.e., weeds) ▪ Loss or alteration of listed plant species or ecological communities	8.3.1

Environmental Element	Description of Interaction (How, When, Where, or Why)	Potential Adverse Environmental Effect	Discussed in Subsection
Water Quality and Quantity	▪ Excavation and backfilling for trenched crossings ▪ Trench subsidence or excessive roach ▪ Drilling mud release if HDD method fails ▪ Installation, use and removal of temporary vehicle crossing structures ▪ Hydrostatic test water withdrawal and release ▪ Encountering historical contamination during excavations	▪ Siltation of watercourses ▪ Reduced water quality ▪ Localized alteration of flow ▪ Change of water quantity ▪ Spread of historical contamination to unaffected water sources	8.3.1
Fish and Fish Habitat	▪ Clearing and disturbance of riparian habitat ▪ Excavation and backfilling of trenches ▪ Temporary installation of vehicle crossings of watercourses ▪ Release of drilling mud if HDD method fails	▪ Fish stress, injury or mortality ▪ Harmful alteration, disruption or destruction of fish habitat (HADD) [including riparian areas] ▪ Sedimentation of watercourses from instream activities	8.3.1
Wetlands	▪ Construction activities in wetlands (general equipment use, vegetation removal, excavation, backfilling and reclamation)	▪ In relation to peatland and non-peaty (mineral) wetlands: ▪ Loss or alteration of wetland habitat important to wildlife, vegetation and humans (i.e., traditional use plants) ▪ Alteration of wetland hydrological and water quality functions	8.3.1
Wildlife and Wildlife Habitat	▪ Clearing of vegetation ▪ Noise generated from construction activities ▪ Vehicle traffic to, from and along the Project ▪ Worker interactions with wildlife ▪ Creation of barriers (e.g., subsoil and strippings windrows, strung pipe) ▪ Potential for increased access during operations ▪ Creation/widening of permanent RoW ▪ Fragmentation of landscape	▪ Habitat alteration/loss through clearing and fragmentation ▪ Sensory disturbance to wildlife ▪ Changes to wildlife movement patterns ▪ Changes to wildlife abundance due to increased predation/hunting/trapping and/or vehicle-wildlife collisions	8.3.1

	Species at Risk or Species of Special Status and Related Habitat	▪ See the "Wildlife and Wildlife Habitat", "Fish and Fish Habitat" and "Vegetation" elements	▪ Potential effects noted in the "Wildlife and Wildlife Habitat", "Fish and Fish Habitat" and "Vegetation" elements as they relate to wildlife, fish and plant species at risk or of special status	8.3.1
			▪ Potential effects to eight species at risk identified in the SARA and/or by the COSEWIC	8.3.2.1
			▪ Specific effects on caribou ▪ Stress, injury, reduced reproductive success and mortality of caribou ▪ Loss or alteration of habitat for caribou	8.3.2.2
	Air Emissions	▪ Release of criteria air contaminants (e.g., sulphur dioxide, nitrogen dioxide, carbon monoxide, particulate matter) ▪ Use of construction vehicles and equipment ▪ Construction and vehicle traffic during dry conditions ▪ Burning during land clearing	▪ Temporary decrease in local air quality due to increased emissions and elevated dust and smoke levels	8.3.1
	Greenhouse Gas (GHG) Emissions	▪ GHG emissions from the use of construction vehicles and equipment ▪ Fugitive or process GHG emissions from the pipeline during transportation of gas, inspections, maintenance or repairs	▪ Minor contributions to global GHG levels	8.3.1
Socio-Economic	Human Occupancy/ Resource Use	▪ Construction, including RoW clearing and clean-up	▪ Disruption of hunting, fishing, trapping, and outfitting activities due to human activities and changes to animal movements ▪ Disruption of normal activities of land users	8.3.1
	Heritage Resources	▪ Clearing, grading and excavating activities along RoW	▪ Damage to, or loss of previously undiscovered heritage resources	8.3.1
	Current Traditional Land and Resource Use	▪ Clearing, grading, excavation, backfilling, reclamation and hydrostatic testing activities during construction ▪ Construction of watercourse crossings	▪ Disruption of Aboriginal traditional hunting, fishing, trapping and plant harvesting activities ▪ Loss or alteration of traditional use sites	8.3.2.3

	Human Health and Aesthetics	▪ No interaction demonstrated		
Other	Accidents and Malfunctions	▪ Spills during construction (hazardous materials, drilling mud during HDD) and/or operations ▪ Traffic accidents ▪ Pipeline rupture (NGTL's or third party - if damaged during crossings)	▪ Soil, groundwater, surface water and/or wetland contamination ▪ Loss or alteration of vegetation ▪ Injury or mortality to wildlife and/or people ▪ Wildfires ▪ Affects to health of land users in the event of an accident or malfunction	8.3.1
	Effects of the Environment on the Project	▪ Changes in area climate and terrain ▪ Environmental stressors (e.g., weather, hydrology, storms, terrain)	▪ Increased construction activities during RAP due to delays in Project schedule	8.3.1

8.3 Analysis of Potential Adverse Environmental Effects

NGTL proposed several mitigation measures to avoid or minimize the potential adverse environmental effects of the Project. These measures included route selection, implementing minimal surface disturbance (MSD) techniques to decrease stripping within the RoW, and minimizing the overlap of construction activities with RAPs.

NGTL committed to several mitigation measures in its application, subsequent updates and responses to information requests. The reader is referred to NGTL's application and supporting documentation for details on all the proposed mitigation.

As noted in Section 7.0 of this ESR, the analysis of potential adverse effects has been divided into Subsection 8.3.1 and 8.3.2. Note that specific 'Views of the Board' are provided for each of the environmental effects discussed in Subsection 8.3.2, whereas the Views presented in Subsection 8.3.1 encompass the remaining effects identified in Subsection 8.2. Both 8.3.1 and 8.3.2 identify recommendations in the event that the NEB grants regulatory approval for the Project.

The preparation of an Environmental Commitments Tracking Table, an Environmental Protection Plan (EPP) and a Post-Construction Monitoring Program (PCMP) are applicable to mitigating any environmental effects as they contribute to ensuring that mitigation measures and monitoring are effectively carried out for the construction and operation phases of the Project. These are discussed below.

Environmental Commitments Tracking Table

The NEB examined NGTL's mitigation measures, and notes the large number of both detailed and broad commitments made on various issues, in multiple documents. Throughout the various stages of the NEB's assessment process, NGTL provided a number of additional commitments in order to address specific concerns brought to its attention. To ensure that no commitments are overlooked, the Board recommends that, in any Certificate that it may grant, a condition be

included requiring NGTL to maintain a Environmental Commitments Tracking Table for reporting on the status of commitments to be fulfilled during construction and operations. See **Recommendation A** in Section 8.6 for detailed wording.

Environmental Protection Plan

NGTL has submitted a draft EPP, including alignment sheets. The EPP includes all the mitigative measures that NGTL commits to implement during construction. The Board recommends that, in any Certificate that it may grant, a condition be included requiring NGTL to file an updated comprehensive EPP and alignment sheets, including updated information from surveys, commitments and conditions. The updated EPP and alignment sheets should also provide evidence that there is a management system in place that ensures the updates of the environmental protection procedures and mitigation measures are effectively communicated to employees, contractors and regulators and that consultation took place with relevant government authorities and Aboriginal groups where applicable. See **Recommendation B** in Section 8.6 for detailed wording.

Post-Construction Monitoring Program

NGTL submitted an initial PCMP within its ESA which was inconsistent with the PCMP contained within its EPP. A robust PCMP (including monitoring methodology, issues to be monitored and consultation with appropriate authorities), is key to ensuring that potential adverse effects have been effectively mitigated, including those which may arise from unforeseen events. In order to ensure that post-construction environmental monitoring is thorough and effective, and that reports are developed and submitted, the Board recommends that, in any Certificate that it may grant, a condition to be included setting out the requirements of NGTL's PCMP to be filed prior to commencing construction, and to identify those to be included in the mandatory reports. See **Recommendation C** in Section 8.6 for detailed wording.

8.3.1 Analysis of Potential Adverse Environmental Effects to be Mitigated through Standard Measures

Subsection 8.2 lists several potential adverse environmental effects that NGTL proposes to address through the use of standard design or mitigation measures as identified in its application, EPP and subsequent filings.

The following table provides additional discussion on certain effects that generated comments or discussion during the assessment.

Potential Adverse Environmental Effect	Details
Harmful alteration, disruption or destruction of fish habitat (including riparian areas)	In the event that the proposed HDD crossing of the Christina River cannot be constructed, and to aid in ensuring that no HADD of fish habitat takes place, the Board recommends that, in any Certificate that it may grant, a condition be included requiring NGTL to notify the Board prior to using a contingency trenched crossing of the river, to provide a copy of any authorization from relevant government agencies (DFO and TC), and to prepare a site-specific reclamation plan for the crossing. See **Recommendation D** in Section 8.6 for detailed wording.
Reduced water quality and quantity	Project mitigation and monitoring commitments, including measures related to water quality and quantity, are captured in the Project's EPP and form part of the Project's mitigation plans. The primary water withdrawal associated with the Project is for water to be used for hydrostatic testing purposes, which involves only temporary and limited withdrawals and discharges. NGTL has provided specific mitigation measures related to this water use, including reference to the appropriate provincial codes of practice.
Alteration of wetland hydrological and water quality functions	Although NGTL has identified mitigation measures for wetlands and committed to post-construction monitoring within its application, the commitment to monitor wetlands has not been explicitly included within the PCMP description of its draft EPP. The Board recommends that, in any Certificate that it may grant, NGTL be required to include wetland monitoring within its PCMP. See **Recommendation C** in Section 8.6.
Introduction and spread of invasive species (i.e. weeds)	NGTL submitted a draft Weed Management Plan and stated that, upon completing the 2012 weed survey, an updated plan would be filed with the Board. The Board notes that the draft plan had some omissions, such as accountability in the post-construction phase and objectives to be met. The Board recommends that, in any Certificate that it may grant, a condition be included setting out the information requirements for the final Weed Management Plan. See **Recommendation E** in Section 8.6 for detailed wording.
Habitat alteration/loss through clearing and fragmentation	In its analysis, to represent all the wildlife species in the Project area, NGTL selected five indicator species: ▪ Caribou; ▪ Moose; ▪ fur bearers/carnivores (including Canada lynx and fisher); ▪ old growth forest birds; and ▪ olive-sided flycatcher. The indicator species are considered applicable to other species with similar life history and habitat requirements. Mitigation measures include temporal avoidance (including restricted activity periods (RAPs) and abiding to set-backs, where applicable. With regard to federally-listed Species at Risk, see subsection 8.3.2.1. Regarding migratory birds, NGTL has committed to conduct clearing outside the migratory bird RAP or take other precautions/measures to avoid disturbing or destroying an active migratory bird nest. NGTL indicated within its draft EPP that the PCMP would involve an assessment of numerous issues including those related to access control within caribou range and predator/ prey dynamics. The Board is of the view that all wildlife and wildlife habitat issues should be included within the PCMP. The Board recommends that, in any Certificate that it may grant, NGTL be required to include these issues within its PCMP. See **Recommendation C** in Subsection 8.6 for detailed wording.

Loss or alteration of native vegetation, including vegetation resources important to wildlife	In its ESA and responses to information requests, NGTL committed to using the minimum surface disturbance (MSD) construction technique. NGTL described the MSD technique as involving normal clearing of the RoW, but not stripping of the full RoW width unless grading is required. Where stripping does not occur, the RoW is surface mulched to prepare it for construction. In winter conditions, the mulched surface is then frozen and provides a stable working surface. The MSD technique allows the original surface material containing vegetative propagules (seed, rhizomes, shallow roots of grasses) to be retained in place and as a result, promotes accelerated natural regeneration of vegetation following construction. This technique is appropriate for winter construction in forested areas, and the Board encourages the development of techniques designed to minimize disturbance.
Damage to, or loss of previously undiscovered heritage resources	The Board notes that NGTL has submitted its HRIA to ACCS, and NGTL recommended that *Historical Resources Act* clearance be granted. The Board recommends that, in any Certificate that it may grant, a condition be included requiring NGTL to file confirmation that it has obtained all archeological and heritage resource permits and clearances for the Project from ACCS. See **Recommendation F** in Subsection 8.6 for detailed wording.
Disruption of community life and cultural well-being	ConklinML, located near the east end of the Project near Highway 881, expressed concern that the Project may disrupt community life due to the influx of workers. NGTL stated that it would use an existing construction camp located on Highway 63 near the Project's western end to house construction workers. This should reduce the potential disruption of community life.
Accidents and Malfunctions	Within its EPP and Contingency Plans, NGTL has measures in place to address potential soil, groundwater, surface water and/or wetland contamination resulting from accidents and/or malfunctions.

The Board is of the view that based on the nature of this Project, the potential adverse environmental effects of the Project as outlined above can be mitigated through the use of standard design or routine measures, as committed to by NGTL in its Project-related documentation. These potential adverse environmental effects are not likely to be significant.

8.3.2 Analysis of Potential Adverse Environmental Effects to be Mitigated through Non-Standard Design and Mitigation Measures

This subsection provides a detailed analysis of certain effects that involve the use of non-standard design or mitigation measures, were the subject of public concern, or for which the Board has identified a relative importance. Each analysis in this subsection specifies mitigation measures, significance criteria ratings (defined in Appendix 2), monitoring commitments, and the Board's corresponding views, including any proposed issue-specific recommendations.

Potential Effects on Species at Risk Identified In the SARA and/or by the COSEWIC

Background/ Issues	NGTL stated that its wildlife and wildlife habitat assessment was based on the assessment of wildlife indicators, which were selected based on ecological significance, socio-economic significance, national and provincial status, and the availability of recent baseline wildlife data (published and unpublished) within the LSA and RSA from between 2001 and 2010. The five wildlife indicators selected by NGTL for this Project are caribou, moose, furbearers/ carnivores, old growth forest birds and olive-sided flycatcher. NGTL stated that the predicted effects of the Project for the selected indicator species were considered applicable to other species, including species listed under the SARA with similar life history and habitat requirements. NGTL stated that ungulate (including caribou) surveys were undertaken; however, it did not plan to conduct additional SARA/ COSEWIC species-specific field surveys for this Project.

	Regarding species at risk (other than caribou which is addressed in Subsection 8.3.2.2 below) which may be present in the Project footprint and that are on Schedule 1 of the SARA and/or identified by the COSEWIC, NGTL stated the following: ▪ Western (boreal) toad: optimal habitat is not readily available along the Project RoW, but, if this species is present, the effects of sensory disturbance are predicted to be minimal because toads would be hibernating during winter construction. ▪ Wolverine: not likely to be present as this species avoids disturbed areas. ▪ Yellow rail, common nighthawk, Canada warbler, olive-sided flycatcher and rusty blackbird: would not be affected as no construction or clean-up activities are planned to occur during the migratory bird RAP. ▪ EC filed two letters of comment with the Board (identified in Subsection 6.1), addressing NGTL's lack of planned 2012 field surveys. EC noted that, since NGTL did not use surveys on or adjacent to the RoW, the information obtained from surveys from other projects in the surrounding region is of limited value in conducting an EA for this Project. EC stated that it had outstanding concerns with respect to the lack of properly timed confirmatory summer wildlife surveys and was therefore, unable to assess the effects of the Project on species at risk. Subsequent to the Board directing NGTL to undertake additional field surveys (29 February 2012), NGTL proposed a methodology for surveying western (boreal) toad, yellow rail, Canada warbler, olive-sided flycatcher, and rusty blackbird, while relying on trapper reports for wolverine and recording incidental observations for common nighthawk. EC agreed with NGTL's methodology regarding common nighthawk.
Mitigation Measures	NGTL has provided a number of routine mitigation measures for wildlife in general, which are also applicable to species at risk, including: ▪ no new activities commencing within the migratory bird RAP; ▪ a Wildlife Encounter Contingency Plan; and ▪ a Wildlife Species of Concern Discovery Contingency Plan.
Monitoring	NGTL indicated within its draft EPP that the PCMP would involve an assessment of issues related to weed control, vegetation re-establishment, general RoW conditions, water crossing stability, reclamation success and caribou.
Views of the Board	The Board is of the view that while some effects of the Project on indicator species may be similar for some listed species, to rely exclusively on indicator species is too broad a generalization, and species at risk populations are often more vulnerable and require greater protection. The Board further notes that the concern with species at risk is not only the occurrence of individuals and the potential impacts on them, but also on the loss of habitat. The Board is of the view that sufficient and complete mitigation measures and monitoring plans cannot be identified and finalized unless more is known about the species and/or species habitat in the Project area. To ensure adequate mitigation and monitoring measures are put in place to respond to the additional surveys, the Board is of the view that, in any Certificate that it may grant, a condition be included requiring NGTL to submit for approval prior to construction a summary of its surveys, an outline of mitigation measures, evidence and summary of consultation with EC and the province and a commitment to undertaking those agencies' recommendation(s) or an explanation of why the recommendation(s) should not be undertaken. See **Recommendation G** in Subsection 8.6 for detailed wording. The Board is of the view that wildlife and wildlife habitat issues, particularly for species at risk, should also be included within the PCMP. The Board recommends that, in any Certificate that it may grant, NGTL be required to include these issues within its PCMP. See **Recommendation C** in Subsection 8.6 for detailed wording.

Evaluation of Significance	Frequency	Duration	Reversibility	Geographical Extent	Magnitude
	Multiple	Short to long-term	Possible	Footprint to LSA	Low to Moderate
	Adverse Effect				
	The Board is of the view that, with the NEB's recommendations and the implementation of NGTL's measures, the Project is not likely to result in significant adverse effects on species at risk listed in the SARA and by the COSEWIC.				

Special Effects on Caribou

Potential adverse environmental effect	▪ Stress, injury, reduced reproductive success and mortality of caribou ▪ Loss or alteration of habitat for caribou
Background/ Issues	Caribou is listed as Threatened on Schedule 1 of the SARA. Approximately 63 km of the Project passes through the Egg-Pony Caribou Area, which is within the East Side of Athabasca River (ESAR) caribou range in northeastern Alberta. Caribou populations in this area are currently in decline. NGTL stated the Project would likely result in approximately 95 ha of high quality caribou habitat being cleared within the RoW. EC stated that it is currently developing a recovery strategy for the Woodland Caribou, Boreal population (Recovery Strategy) which identifies proposed critical habitat for the ESAR population, and notes that "the total disturbed area that is avoided by boreal caribou includes the anthropogenic footprint plus a 500 m buffer" (on each side of the disturbance). EC requested that NGTL identify how it would comply with the Recovery Strategy and how it would limit or avoid impacts to critical habitat located in the Project area. EC recommended that all clearing activities be completed by February 15, that construction activities be completed by March 1, and that these be firm dates for activities to cease during the restricted activity period for caribou. ConklinML questioned NGTL's view that the magnitude of change to caribou abundance due to the Project would not be high, particularly due to increased predation, increased linear disturbance and increased access. ConklinML further stated that increased predation would be a long-term effect and wanted to know the status of the Provincial Caribou Policy entitled *A Woodland Caribou Policy for Alberta*. ConklinML also expressed concerns about how NGTL would monitor the movement of caribou during the construction of the Pipeline and how it would adjust its construction practices to accommodate caribou herds. NGTL stated that the proposed Recovery Strategy provides broad strategies and general approaches which would inform the development and implementation of actions that would occur at the provincial level and vary by individual local population range. NGTL noted that although the Provincial Caribou Policy was released in June 2011, the implementation plan is under development by ASRD. The specific elements of the Provincial Caribou Policy include maintaining caribou habitat, restoring disturbed habitat, and effective management of wildlife populations (including predators and other prey species). NGTL prepared a Caribou Protection Plan (CPP) for the Project that specifies mitigation measures and monitoring activities specific to caribou and caribou habitat, and outlines the proposed actions including minimal disturbance and a reclamation plan for the RoW. Measures in the CPP are included within the EPP. NGTL submitted the CPP to EC and the NEB. The CPP would also be submitted to ASRD for provincial approval by October 2012.

<table>
<tr><td>Mitigation Measures</td><td>NGTL stated that the route chosen for the proposed Pipeline was partly to minimize effects on caribou. NGTL planned activities with the greatest potential for disturbance to caribou (e.g. clearing and grading) to be completed by the start of the caribou RAP. NGTL stated it may not be able to complete other activities (e.g., ditching and backfilling) before the start of the caribou RAP, but that it is preferable, from a disturbance perspective, to complete construction in one season, rather than returning for a second season.

NGTL's proposed mitigation measures also include creating line-of-sight breaks and access barriers, and prompt reclamation of disturbed areas intended to accelerate the recovery of disturbed habitat.

NGTL stated that it would implement a number of mitigations to reduce the effect of construction activities to caribou, such as leaving gaps in windrows and minimizing the amount of open trench at any given time, so as to reduce blocking caribou passage.</td></tr>
<tr><td>Monitoring</td><td>NGTL has identified monitoring activities that it would conduct during construction and post-construction. The monitoring program would include a caribou sighting program where all staff and contractors are required to report caribou sightings.</td></tr>
<tr><td>Views of the NEB</td><td>The Board notes that even with NGTL's proposed mitigative measures and the provincially required CPP, there would still be disturbance to caribou and loss, degradation and fragmentation of habitat beginning with construction and continuing throughout the lifecycle of the Project. Given the listing of caribou as a threatened species, the Project's traversing of designated range, and the potential overlap with the caribou RAP, the Board is of the view that great care needs to be taken over the extent of and details of mitigation.

With regard to disturbance from construction, the Board is of the view that, within the Egg-Pony Caribou Area, all clearing and grading activities should be completed by February 15 and NGTL should aim to complete all other construction activities by March 1, while ensuring that construction is still completed within one season. Therefore the Board recommends that NGTL be required to:

▪ ensure those aims are reflected in its construction schedule;
▪ file a contingency plan to accelerate construction in the event of delays; and
▪ include progress towards meeting those dates in its construction progress reports.

Together, the objective of these three requirements is to minimize construction activities disturbing caribou during the RAP. For detailed wording see Recommendations L, M and N.

With regard to habitat, the Board is of the view that project proponents have a responsibility to not only reduce effects on caribou habitat, but to also restore affected habitat as soon as possible and as much as possible. The Board is of the view that, in any Certificate that it may grant, a condition be included requiring NGTL to prepare a Caribou Habitat Restoration Plan (CHRP), as set out in Recommendation H. Separate conditions should be included to require that NGTL develop a program to monitor the effectiveness of those restoration measures, as detailed in Recommendation J, and to report on that monitoring, as detailed in Recommendation K.

The Board discusses further habitat mitigation with respect to cumulative effects on caribou in Subsection 8.4.</td></tr>
<tr><td>Evaluation of Significance</td><td>
<table>
<tr><th>Frequency</th><th>Duration</th><th>Reversibility</th><th>Geographical Extent</th><th>Magnitude</th></tr>
<tr><td>Multiple</td><td>Long-term</td><td>Possible</td><td>RSA</td><td>Moderate</td></tr>
</table>
Adverse Effect

The Board is of the view that, with the implementation of NGTL's commitments as well as the NEB's recommendations, the Project is not likely to result in significant adverse effects on caribou.</td></tr>
</table>

Aboriginal Traditional Land and Resource Use

Potential adverse environmental effect	▪ Disruption of Aboriginal traditional hunting, fishing, trapping and plant harvesting activities ▪ Loss or alteration of traditional use sites
Background/ Issues	A total of 13 Aboriginal groups were identified by NGTL, the Board and the MPMO as being potentially affected by the Project. NGTL based its ESR on interviews conducted with Elders of ChardML and FMFN. It incorporated FMFN's information from its existing 2006 TLU report and regional information obtained from other industry studies and its experience with other projects. Members of ChardML, FMFN and Willow Lake Métis Local #780 (WLML) participated in biophysical field studies or route over-flights. Four Aboriginal groups expressed concerns about impacts on traditional land and resource use. CPDFN outlined its concerns in a letter of comment. CPDFN's overarching concern was for the protection of the integrity of the White Muskeg, a unique landscape of cultural and ecological significance. It was concerned about potential impacts to water quality, quantity, and connectivity, and protecting the quality and quantity of fish. Impacts on woodland caribou and lynx and habitat of these two species were also a concern. Chard ML provided the Board with information on the resource harvesting activities of its members in and near Project lands. It identified its traditional land and resource use such as: ▪ hunting of a number of wildlife species within or near Project lands; ▪ fishing of a number of fish species in named water bodies and specific areas; ▪ the use of resources such as various types of plants and berries in identified areas; and ▪ cultural sites including trails, waterways and cabins. Chard ML indicated that the following effects could result from the Project: ▪ impacts on water; and ▪ impacts on the habitat of named species of wildlife that are hunted or fished and on berries and other plants or materials that are harvested. It stated that the traditional activities of the Chard Métis will be adversely affected by the proposed Project, notwithstanding proposed mitigation measures. ConklinML identified its traditional land and resource use as including: ▪ hunting of a number of wildlife species in geographically described areas in and around the Project; ▪ fishing in the Christina and Kettle Rivers (ConklinML reported the presence of Arctic grayling in several rivers and creeks); and ▪ harvesting of medicinal and food plants in described locations. ConklinML stated that the Project would impact cultural sites. It described the impacts of the Project as including: ▪ Conlkin ML members will have to travel a further distance to harvest; ▪ impacts on water bodies including muskeg; and ▪ impacts on the habitat, health and abundance of woodland caribou. Christina River Dene Nation Council (CRDNC) expressed concerns about potential impacts on caribou and other species within its traditional territory. It was also concerned about the potential impact on water supply and the livelihood and way of life of the people.

<table>
<tr><td></td><td>NGTL considers that it has a thorough understanding of the current traditional use of lands by Aboriginal people within the Project area. It will continue to engage Aboriginal groups with respect to the Project and will discuss the findings of TLU studies that have been or are being completed. NGTL stated that the information collected during the TLU studies will be used during continued Project planning and development and will be incorporated into the EPP and environmental alignment sheets for the Project.</td></tr>
<tr><td>Mitigation Measures</td><td>NGTL has proposed a variety of mitigation measures in its EPP, including minimal surface disturbance construction techniques to return the RoW to pre-construction condition as soon as possible and minimize or avoid potential adverse effects of the Project on each environmental component.

Section 8.3.1 outlines the standard mitigation proposed by NGTL to address potential adverse impacts on matters of concern to Aboriginal groups such as fish habitat, water quality and quantity, alteration of wetlands, habitat alteration/loss through clearing and fragmentation, and loss or alteration of native vegetation. Recommendations C and D are proposed with respect to this mitigation.

Section 8.3.2.2 addresses Aboriginal concerns about caribou and caribou habitat and includes additional mitigation proposed by NGTL. Recommendations H through N are proposed with respect to this mitigation.

NGTL has developed standard mitigation measures for potential TLU sites that may be encountered during construction. It will implement its Traditional Land Use Sites Discovery Contingency Plan including suspending work immediately should any previously unidentified sites be encountered.

NGTL indicated that it will continue to engage and update a number of Aboriginal groups on the Project including finalizing the TLU work and discussing appropriate mitigation.

NGTL concludes that while the Project may have short-term impacts on traditional land and resource use within the LSA, the project will not affect the ability of Aboriginal people to exercise their traditional practices across their traditional territories.</td></tr>
<tr><td>Views of the NEB</td><td>The Board is of the view that impacts on traditional land and resource use would be minimal given the short duration of construction and the employment of NGTL's proposed mitigation measures. The Board expects NGTL to fulfill its commitment to discuss the issues and concerns to Aboriginal groups with them and to consider additional mitigation where warranted.</td></tr>
<tr><td>Evaluation of Significance</td><td>
<table>
<tr><th>Frequency</th><th>Duration</th><th>Reversibility</th><th>Geographical Extent</th><th>Magnitude</th></tr>
<tr><td>Single to Multiple</td><td>Short to Long-term</td><td>Possible</td><td>Footprint to RSA</td><td>Low to Moderate</td></tr>
</table>
Adverse Effect

The Board is of the view that, with the implementation of NGTL's commitments the Project is not likely to result in significant adverse effects on the current traditional land and resource use of Aboriginal people.</td></tr>
</table>

8.4 Cumulative Effects Assessment (CEA)

The assessment of cumulative effects entails considering the residual effects from the Project in combination with residual effects from other projects and activities that have been or will be carried out, within the broader geographic region, over a longer time frame and within the ecological context.

Considerable industrial development has occurred and is occurring in the Project area, including forestry, energy development (e.g., pipelines, seismic clearing, wells, mines), transportation

corridors and transmission lines. NGTL considered existing, approved and planned projects in the RSA that might contribute to cumulative effects in combination with the Project, following Canadian Environmental Assessment Agency guidance. NGTL calculated that collectively, existing and approved development footprints cover 36,929 ha (approximately 13%) of the RSA (287,749 ha).

NGTL identified adverse residual effects from the Project on the following valued environmental components (VECs): soil and soil productivity, vegetation, surface water flow, fish and fish habitat, wetlands, wildlife and wildlife habitat, species at risk, and air quality. As well, NGTL stated that residual effects on the above-mentioned VECs could have indirect effects on such valued socio-economic components as human occupancy and resource use, Aboriginal traditional land and resource use, and social and cultural well-being.

NGTL determined that there would be interactions between the residual effects from the Project and residual effects from other projects in the RSA for each of these valued components except for fish and fish habitat. Based on factors such as magnitude, geographic extent, duration and reversibility, NGTL estimated the importance of each interaction as follows:

- Incremental reduction in caribou abundance – high importance
- Incremental loss or alteration of habitat for caribou, moose, lynx, fisher, olive-sided flycatcher and old growth forest birds – moderate importance
- Incremental loss or alteration of wetland vegetation, as well as changes in the availability of fish and wildlife for Aboriginal traditional hunting, trapping and fishing – low to moderate importance
- Interactions related to all other VECs – low or negligible

CPDFN, ConklinML, ChardML and CRDNC raised concerns over the cumulative effects of industrial development in the area, and the resulting impacts on their traditional harvesting activities. EC raised numerous questions and concerns about effects on caribou and its habitat.

Given the conservation status of caribou, its importance, and the Project effects due to both direct and indirect habitat disturbance, caribou is discussed separately below.

With respect to the incremental loss of habitat to other species (e.g. moose, lynx, fisher, olive-sided flycatcher, old growth forest birds), as well as wetland vegetation, there is currently measurable, existing cumulative disturbance in the RSA. The Board finds that the level of habitat disturbance caused by the Project to each VEC is relatively minor, and that other proposed projects in the area will undergo review by the appropriate agencies. Further, the mitigation detailed below for caribou and caribou habitat will also benefit other species that rely upon contiguous forest, and will help to address the Project's contribution to landscape-level cumulative environmental effects.

8.4.1 Caribou and Caribou Habitat

The Board is concerned about caribou and caribou habitat in the Project area because the caribou is listed as a threatened species, the ESAR caribou population is declining, and the Project would further disturb ESAR caribou habitat.

NGTL concluded there is a "long-term cumulative effect of high magnitude" on caribou but that "this cumulative effect is realized prior to construction and operation of the proposed Project".

EC's proposed Recovery Strategy notes that caribou "will avoid anthropogenic footprints such as seismic lines, roads, cut blocks, etc., as well as the adjacent habitat for a distance up to 500 m." It also notes that 77% of the entire ESAR range[3] has already been disturbed when these 500 m indirect (buffer) disturbances surrounding direct anthropogenic disturbances are taken into account.

NGTL's map[4] illustrating existing and approved projects within the RSA also shows a high level of fragmentation from linear disturbances.[5]

Although NGTL has lessened Project effects by paralleling existing linear disturbance for 55 km of the 77 km pipeline, the level of restoration of existing disturbances and the additional time required for restoration due to the Project are unclear. EC's proposed Recovery Strategy notes "Boreal caribou exist in mature boreal forest ecosystems that are established over many decades, and in turn take many years to recover from disturbance. The loss of habitat and the increase in predators and alternate prey populations in caribou ranges require time frames in excess of 50 to 100 years to reverse".

The Board is of the view that, even with the mitigation proposed in the EPP and CHRP, there would remain residual effects from the Project that would contribute to cumulative effects on caribou and their habitat. These residual effects result not only from direct and indirect disturbance where the RoW passes through a new area, but also where the RoW parallels an existing disturbance (in the latter case it will often both widen and increase the duration of the existing disturbance). The Board notes that it has previously commented on the nature of cumulative effects on species at risk and the need to fully address residual effects, in OH-1-2009, in its May 2011 update to the NEB Filing Manual, and most recently in GH-2-2011. Given the already substantial ongoing cumulative effects on caribou in the region, the Board is therefore of the view that any residual effects on caribou habitat should be fully compensated for.

Given the ESAR caribou population is currently declining and the considerable length of time it can take to restore disturbed caribou habitat, the need to avoid further contributions to cumulative effects is also time sensitive. Therefore, in addition to the mitigation measures and recommendations in Subsection 8.3.2.2, the Board recommends that, in any Certificate that it may grant, a condition be included requiring NGTL to offset all residual effects to caribou and caribou habitat, as set out in **Recommendation I** in Subsection 8.6. Further, separate conditions should be included to require NGTL to develop a program to monitor the effectiveness of those offset measures, as detailed in **Recommendation J**, and to report on that monitoring, as detailed in **Recommendation K.**

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[3] Much of the RSA (287,749 ha) overlaps the Egg-Pony caribou habitat range, which in turn forms part of the ESAR range (1,315,980 ha).

[4] ESA Part 2 A2A6Q4 PDF page 165 of 243.

[5] NGTL report there are 3159 km of pipelines, 278 km of roads, and 3743 km of seismic cut lines/recreational trails within the RSA from existing and approved developments. [A2A6Q4 PDF page 166 of 243]

8.5 Follow-Up Program

Under the CEA Act, a follow-up program is used to verify the accuracy of the environmental assessment of a project and to determine the effectiveness of any measures taken to mitigate the adverse environmental effects of the project. Follow-up programs can also be used to provide information on environmental effects and mitigation to improve and/or support future cumulative environmental effects assessments.

In determining whether a follow up program is appropriate, the Board has considered the nature and scale of the Project and the potential adverse environmental effects. The Board also considered the Recommendations below, its authority throughout the lifecycle of the Project, and its approach to regulatory oversight.

Given that caribou habitat restoration and offset measures are non-standard approaches in this context, that there are many stakeholders working towards caribou habitat conservation and management, and that the approach taken could extend beyond the boundaries of the assessed area, the Board is of the view that a CEA Act follow-up program on this matter is appropriate. Taking these elements into consideration, the Board recommends that in any Certificate it may grant, the Caribou Habitat Restoration and Offset Measures Monitoring Program (detailed in **Recommendations J and K**) be implemented as a follow-up program under the CEA Act.

8.6 Recommendations

It is recommended that, in any Certificate that the Board may grant, a condition be included requiring NGTL to carry out all of the environmental protection and mitigation measures outlined in its application and subsequent submissions.

In these recommendations, the expression "commencing construction" means the clearing of vegetation, ground-breaking and other forms of RoW preparation that may have an impact upon the environment, but does not include activities associated with normal surveying activities.

Further, it is also recommended that the following be included as conditions in any Certificate that the Board may grant:

A. Commitments Tracking Table

NGTL shall:

a) file an updated Commitments Tracking Table with the Board 14 days prior to commencement of construction;

b) update the status of the commitments in paragraph (a) on a monthly basis until the commencement of operation and on an annual basis thereafter, until all commitments have been achieved;

c) maintain at its construction office(s):

i) the relevant environmental portion of the Commitments Tracking Table listing all regulatory commitments, including but not limited to, those commitments resulting from NGTL's application and subsequent filings, and conditions from permits, authorizations and approvals;

ii) copies of any permits, approvals or authorizations for the Project issued by federal, provincial or other permitting authorities, which include environmental conditions or site-specific mitigation or monitoring measures; and

iii) any subsequent variances to any permits, approvals or authorizations in ii).

B. Environmental Protection Plan (EPP) and Environmental Alignment Sheets

NGTL shall file with the Board for approval, at least 60 days prior to commencing construction:

a) an updated EPP, including environmental alignment sheets, for the construction and operation of the Project facilities.

The EPP shall be a comprehensive compilation of all environmental protection procedures, mitigation measures, and monitoring commitments, as set out in NGTL's application for the Project, subsequent filings, evidence collected during the hearing process, or as otherwise agreed to during questioning or in its related submissions. The EPP shall describe the criteria for the implementation of all procedures and measures. The EPP shall include, but not be limited to, the following:

i) environmental procedures including site-specific plans, criteria for implementation of these procedures, mitigation measures and monitoring applicable to all Project phases and activities; and

ii) a reclamation plan which includes a description of the condition to which NGTL intends to reclaim and maintain the RoW once construction has been completed, and a description of measurable goals for reclamation.

b) all mitigation related to caribou and caribou habitat is placed in one chapter of the EPP which includes;

i) NGTL's commitments to adhering to specific provincial and federal best practices, requirements and timing restrictions;

ii) a list of all measures to minimize disturbance to caribou habitat, and measures to be taken before and during construction to help accelerate the restoration of caribou habitat; and

iii) the locations where those measures will be taken.

c) evidence demonstrating that:

i) there is a management system in place which ensures the updates of the environmental protection procedures, mitigation measures and monitoring are effectively communicated to employees, contractors and regulators; and

ii) consultation took place with relevant government authorities, where applicable.

C. Post-Construction Monitoring Program

a) NGTL shall file with the Board for approval, at least 60 days prior to commencing construction, a preliminary detailed post-construction monitoring program (PCMP) which:

i) describes the methodology to be used for monitoring and the criteria established for evaluating success;

ii) identifies the issues to be monitored, including all valued ecosystem components contained in the PCMP section of the draft EPP together with wetland habitat quality and function, wildlife, wildlife habitat, and species at risk; and

iii) includes details of consultation undertaken with appropriate provincial and federal authorities.

b) On or before 31 January after each of the first, third, and fifth complete growing seasons following the commencement of operation of the Project, NGTL shall file with the Board a post-construction environmental monitoring report that:

i) describes the methodology used for monitoring, the criteria established for evaluating success and the results found;

ii) identifies the issues to be monitored, including but not limited to unexpected issues that arose during construction, and their locations (e.g., on a map or diagram, in a table);

iii) describes the current status of the issues (resolved or unresolved), any deviations from plans and corrective actions undertaken;

iv) assesses the effectiveness of mitigation (planned and corrective) measures applied against the criteria for success;

v) includes details of consultation undertaken with appropriate provincial and federal authorities;

vi) provides proposed measures and the schedule that NGTL would implement to address ongoing issues or concerns; and

vii) includes an assessment of wetland habitat and wildlife and wildlife habitat, including species at risk.

The first monitoring report shall include a final PCMP, incorporating any changes or refinements to the preliminary PCMP.

D. Horizontal Directional Drilling (HDD) of Christina River

NGTL shall:

a) notify the Board in writing of any change from the proposed horizontal directional drilling watercourse crossing method, at least seven days prior to implementing a contingency crossing of Christina River, and provide the reasons for that change;

b) file with the Board, prior to commencing construction of a contingency crossing of Christina River, a copy of the authorizations from relevant government agencies for the in-stream crossing method; and

c) file with the Board, within 30 days of completing a contingency trenched crossing of Christina River, a site-specific reclamation plan for the crossing which includes the desired outcomes following implementation of the plan.

E. Weed Management Plan

NGTL shall file with the Board, at least 30 days prior to requesting Leave to Open, a project-specific Weed Management Plan that includes:

a) NGTL's goals and measurable objectives regarding weed management;

b) the methods and procedures available to achieve the mitigation goals and clear decision criteria for their selection;

c) either:

   i) evidence confirming satisfaction of all relevant regulatory authorities, or, if not possible,

   ii) evidence of its consultation with all relevant regulatory authorities and a summary of their outstanding concerns;

d) the criteria to determine if the mitigation goals have been met;

e) the frequency of monitoring activities along the RoWs and temporary workspaces;

f) training and qualification requirements of NGTL staff responsible for monitoring;

g) a mechanism for tracking weed problems and weed control activities; and

h) criteria to evaluate the effectiveness of the Weed Management Plan, as well as adaptive management practices.

F. Heritage Resources

At least 30 days prior to the commencement of construction, NGTL shall file with the Board:

a) a copy of correspondence from Alberta Culture and Community Services confirming that NGTL has obtained all archaeological and heritage resource permits and clearances; and

b) a statement on how NGTL intends to implement any recommendations contained in a) above.

G. Species at Risk Surveys

NGTL shall submit for approval 60 days prior to the commencement of construction:

a) a summary of its findings based on field surveys for western (boreal) toad, yellow rail, Canada warbler, olive-sided flycatcher, and rusty blackbird, trapper data for wolverine and incidental observations for common nighthawk;

b) specific mitigation measures that will be implemented;

c) an outline of how NGTL will conduct post-construction monitoring for these species and performance measures that will be used; and

d) evidence of consultation with Environment Canada (EC) and the province that includes a summary of all concerns raised by EC and the province and a commitment to undertaking those agencies' recommendations. In those cases where NGTL does not commit to those recommendations, NGTL shall provide a detailed explanation.

H. Caribou Habitat Restoration Plan (CHRP)

NGTL shall file with the Board for approval, as per the timelines below, preliminary and final versions of a Caribou Habitat Restoration Plan (CHRP).

a) Preliminary CHRP - to be submitted at least 60 days prior to commencing construction. This version of the CHRP shall include, but not be limited to:

    i) the goals and measurable objectives of the CHRP;

    ii) identification of any suitable immediate, medium-term and long-term caribou habitat restoration methodologies, as well as a literature review and discussion of the effectiveness of the different potential methods;

    iii) the framework that will be used to identify potential caribou habitat restoration sites and the decision-making criteria that will be used for final site selection;

    iv) the criteria that will be used to evaluate the effectiveness of the CHRP to determine whether goals have been met;

v) a tentative schedule indicating when measures will be initiated and completed; and

vi) evidence and a summary of consultation with EC and Alberta Sustainable Resource Development (ASRD) regarding the CHRP.

b) Final CHRP - to be submitted on or before 1 November after the first complete growing season following the commencement of operation of the Project. This updated version of the CHRP shall include, but not be limited to:

i) the preliminary CHRP, with any updates highlighted in a revision log;

ii) a complete list of the proposed sites for caribou habitat restoration, including a description of the site-specific restoration activities and maps or Environmental Alignment Sheets showing the locations of the sites;

iii) confirmation of the rationale used to select the caribou habitat restoration sites;

iv) a discussion of the locations or conditions that may present specific challenges;

v) a schedule indicating when measures will be initiated and completed;

vi) evidence and summary of consultation with EC and ASRD regarding the Final CHRP; and

vii) a quantitative and qualitative assessment of the area of caribou habitat that is directly and indirectly disturbed and the duration of spatial disturbance.

I. Offset Measures Plan for Residual Impacts to Caribou Habitat

NGTL shall file with the Board for approval a plan to offset all residual Project-related effects resulting from directly and indirectly disturbed caribou habitat, after taking into account the implementation of the EPP and CHRP measures. The Offset Measures Plan shall include:

a) a preliminary version, to be filed for approval at least 60 days prior to requesting Leave to Open, with the criteria and the measurable objectives of the plan, including, but not limited to, a discussion of:

i) an initial quantification of the area directly and indirectly disturbed;

ii) a list of the potential offset measures available;

iii) the appropriate offset ratio for each potential measure;

iv) the expected effectiveness of each measure;

v) the relative value of each measure towards achieving the offset; and

vi) the decision-making criteria for selecting which specific offset measures and accompanying offset ratios would be used under what circumstances;

b) a final version, to be filed for approval on or before 1 February after the first complete growing season following the commencement of operation of the Project, with:

i) the contents of the preliminary version, with any updates highlighted in a revision log;

ii) a complete list of the offset measures and appropriate offset ratios to be implemented or already underway, including a description of site-specific details and maps showing the locations;

iii) a schedule indicating when measures will be initiated and completed; and,

iv) either an assessment of the effectiveness of the measures and their value in offsetting the residual effects or a detailed plan for completing an assessment of the effectiveness and value of the offset;

Both the preliminary and final versions of the plan shall also include:

c) a description of NGTL's consultations with potentially affected Aboriginal groups regarding the plan, including any concerns that were raised and how these have been addressed; and

d) evidence and summary of consultation with EC and ASRD regarding the plan.

J. Caribou Habitat Restoration and Offset Measures Monitoring Program (Program)

NGTL shall file with the Board for approval, on or before 1 February after the first complete growing season following the commencement of operation of the Project, a program for monitoring and verifying the effectiveness of the caribou habitat restoration and offset measures implemented as part of the CHRP and Offset Measures Plan. This program shall include, but not be limited to:

a) the scientific methodology or protocol for short-term and long-term monitoring of the restoration and offset measures, and the effectiveness of the measures;

b) frequency, timing and locations of monitoring and the rationale for each;

c) protocols for how restoration and offset measures will be adapted, as required, based on the monitoring results from the implementation of either the Project or other NGTL CHRPs and Offset Measures Plans; and

d) a schedule for filing reports of monitoring results and the adaptive management responses, to the NEB, EC and ASRD, to be contained in the Program as well as at the beginning of each report filed.

K. Monitoring Reports

NGTL shall file with the Board, based on the schedule referred to in the Caribou Habitat Restoration and Offset Measures Monitoring Program, a report(s) outlining the results of the monitoring program.

L. Construction Schedule Regarding Caribou

[Append the following text to the Board's standard condition requiring a detailed construction schedule:]

> All clearing and grading within the Egg-Pony Caribou Area shall be completed by 15 February 2013. The schedule shall reflect NGTL's commitment of minimizing overlap with the Caribou restrictive activity period (RAP). The schedule shall also demonstrate the aim of completing all other construction activities within the Egg-Pony Caribou Area by 1 March 2013.

M. Caribou Restricted Activity Period (RAP) Contingency Plan

NGTL shall file with the Board, by 15 December 2012, a contingency plan specifying additional measures NGTL will implement, to accelerate construction activities in the event that any potential delays risk increasing the overlap of construction activities with the Caribou RAP.

N. Construction Progress Reports Regarding Caribou

[Append the following text to the Board's standard condition requiring construction progress reports:]

> Each progress report after 15 December 2012 shall also include an update on the extent to which potential delays risk increasing the overlap of construction activities with the Caribou RAP, and an explanation of whether the measures in the Caribou RAP Contingency Plan need to be implemented.

9.0 THE NEB'S CONCLUSION

Pursuant to the CEA Act, the NEB has determined that if the Project is approved, and taking into account the implementation of the NGTL's proposed environmental protection procedures and mitigation measures, compliance with the Board's regulatory requirements and the NEB's Proposed Conditions included in this ESR, the Project is not likely to cause significant adverse environmental effects.

This ESR was approved by the NEB on the date specified on the cover page of this report under the heading 'CEA Act Determination Date'.

10.0 NEB CONTACT

Sheri Young
Secretary of the Board
National Energy Board
444 Seventh Avenue S.W.
Calgary, Alberta T2P 0X8
Phone: 1-800-899-1265
Facsimile: 1-877-288-8803

APPENDIX 1: SCOPE OF THE EA

NOVA Gas Transmission Ltd.
Leismer – Kettle River Crossover Pipeline Project
Scope of the Environmental Assessment Pursuant to the *Canadian Environmental Assessment Act*

1.0 INTRODUCTION

NOVA Gas Transmission Ltd. (NGTL), a wholly owned subsidiary of TransCanada PipeLines Limited, is proposing to construct and operate the Leismer – Kettle River Crossover Pipeline (the Project). This would require a Certificate of Public Convenience and Necessity pursuant to section 52 of the *National Energy Board Act* (NEB Act). The Project would also be subject to an environmental assessment (EA) under the *Canadian Environmental Assessment Act* (CEA Act).

On 3 December 2010, NGTL filed a Project Description with the National Energy Board (NEB) regarding the proposed Project. One function of the Project Description is to begin initiating coordination of the EA process pursuant to the CEA Act.

On 16 December 2010, the NEB sent out a notification pursuant to section 5 of the *Regulations Respecting the Coordination by Federal Authorities of Environmental Assessment Procedures and Requirements* (Federal Coordination Regulations). In response, the following departments identified themselves either as a Responsible Authority (RA) likely to require an EA under the CEA Act or as a Federal Authority (FA) in possession of specialist or expert information or knowledge in respect of the proposed project EA:

- NEB – RA
- Transport Canada – RA
- Fisheries and Oceans Canada – FA
- Environment Canada – FA
- Health Canada – FA
- Natural Resources Canada – FA

The Province of Alberta was also notified.

This Scope of the EA was established by the RAs, after consulting with the FAs, in accordance with the CEA Act and the Federal Coordination Regulations.

2.0 SCOPE OF THE ASSESSMENT

2.1 Scope of the Project

The scope of the Project for the purposes of the EA includes the various components of the

Project, as described by NGTL in its 15 July 2011 Project application submitted to the NEB. The physical activities include construction, operation, maintenance and foreseeable changes, and reclamation, relating to the entire Project, including the physical works described in greater detail in the Project application.

The proposed Project would provide additional capacity to transport sweet natural gas in northeastern Alberta. The Project would consist of approximately 77 km of 762 mm (30-inch) outside diameter pipe, located approximately 90 km south of Fort McMurray, Alberta. The Pipeline right-of-way (RoW) would parallel existing linear disturbances for approximately 55 km, of which, approximately 29 km is considered contiguous and approximately 26 km is considered non-contiguous. The remaining 22 km of RoW for the Project does not parallel existing linear disturbances.

Additional facilities would include pipeline valves, launching/receiving facilities for in-line inspection tools, cathodic protection, and control systems. Some temporary infrastructure would be required for construction including access, pipe storage sites, and contractor yards. The Project would require the crossing of the Christina River, House River and Pony Creek, as well as numerous unnamed watercourses.

NGTL is proposing to begin construction of the Project in the fourth quarter of 2012 and the proposed in-service date is in the second quarter of 2013.

Any works and activities associated with additional modifications or associated with the decommissioning or abandonment phase of the Project would be subject to future examination under the NEB Act and, consequently, under the CEA Act, as appropriate. Therefore, at this time, any works or activities associated with these phases of the Project will be examined in a broad context only.

2.2 Factors to be Considered

The EA will include a consideration of the following factors listed in paragraphs 16(1) (a) to (d) of the CEA Act:

(a) the environmental effects of the Project, including the environmental effects of malfunctions or accidents that may occur in connection with the Project and any cumulative environmental effects that are likely to result from the Project in combination with other projects or activities that have been or will be carried out;

(b) the significance of the effects referred to in paragraph (a);

(c) comments from the public that are received during the EA process; and

(d) measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the Project.

For further clarity, subsection 2(1) of the CEA Act defines 'environmental effect' as:

(a) any change that the project may cause in the environment, including any change that the project may cause to a listed wildlife species, its critical habitat or the residences of individuals of that species, as those terms are defined in subsection 2(1) of the *Species at Risk Act*;

(b) any effect of any change referred to in paragraph (a) on

i. health and socio economic conditions,

ii. physical and cultural heritage,

iii. the current use of lands and resources for traditional purposes by aboriginal persons,

iv. any structure, site or thing that is of historical, archaeological, paleontological, or architectural significance; or

(c) any change to the project that may be caused by the environment,

whether any such change or effect occurs within or outside Canada.

2.3 Scope of the Factors to be Considered

The EA will consider the potential effects of the proposed Project within spatial and temporal boundaries within which the Project may potentially interact with, and have an effect on components of the environment. These boundaries will vary with the issues and factors considered, and will include but not be limited to:

- construction, operation and site reclamation, as well as any other undertakings proposed by the proponent or that are likely to be carried out in relation to the physical works proposed by the proponent, including mitigation and habitat replacement measures;
- seasonal or other natural variations of a population or ecological component;
- any sensitive life cycle phases of species (e.g., wildlife, vegetation) in relation to the timing of Project activities;
- the time required for an effect to become evident;
- the area within which a population or ecological component functions; and
- the area affected by the Project.

As indicated above, the EA will consider cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out.

APPENDIX 2: DEFINITIONS OF EVALUATION OF SIGNIFICANCE CRITERIA

Criteria	Rating	Definition
All criteria	Uncertain	When no other criteria rating descriptor is applicable due to either lack of information or inability to predict
Frequency (how often would the event that caused the effect occur)	Accidental	Rare and unplanned occurrence over the Project lifecycle
	Single	One time event within any phase of the Project lifecycle
	Multiple	Multiple occurrences during any phase of the Project lifecycle
	Continuous	Continuous through any phase of the Project lifecycle
Duration	Short-term	Adverse environmental effect duration is limited to the proposed construction in the order of weeks to months
	Medium-term	Adverse environmental effect duration is in the order of months to a few years
	Long-term	Adverse environmental effect duration is in the order of many years to decades
Reversibility	Reversible	Adverse environmental effect expected to return to baseline conditions within the life of the Project
	Possible	Adverse environmental effect may return to baseline conditions during or after the life of the Project
	Irreversible	Adverse environmental effect would likely be permanent
Geographic Extent	Footprint	Effect would be limited to the area physically disturbed by the Project development, including the width of the RoW and TWS
	LSA	Effect would be limited to where direct interaction with the biophysical and human environment could occur as a result of construction or reclamation activities. This area varies relative to the receptor being considered.
	RSA	Effect would be recognized in the area beyond the LSA. This area also varies relative to the receptor being considered.
Magnitude	Low	Effect is negligible, if any; restricted to a few individuals/species or only slightly affects the resource or parties involved; and would impact quality of life for some, but individuals commonly adapt or become habituated, and the effect is widely accepted by society.
	Moderate	Effect would impact many individuals/species or noticeably affect the resource or parties involved; is detectable but below environmental, regulatory or social standards or tolerance; and would impact quality of life but the effect is normally accepted by society.
	High	Effect would affect numerous individuals or affect the resource or parties involved in a substantial manner; is beyond environmental, regulatory or social standards or tolerance; and would impact quality of life, result in lasting stress and is generally not accepted by society except under extenuating circumstance.
Evaluation of Significance	Likely to be significant	Effects that are of high frequency or long-term duration, irreversible, of regional extent and of high magnitude.
	Not likely to be significant	Any adverse effect that does not meet the above criteria for "significant"